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JPRS-UMA-87-022

9 APRIL 1987

# USSR Report

MILITARY AFFAIRS

MILITARY HERALD

No. 10, OCTOBER 1986

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## HIGH LEVEL OF ASSIMILATION OF NEW EQUIPMENT

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 2-4

[Article by Col Gen V. Lebedev: "A High Level of Assimilation of New Equipment"]

[Text] The enormous successes of the Soviet people in communist construction and the untiring concern of our party and government for the Soviet Armed Forces made it possible to raise their combat readiness and fighting efficiency even higher. The troops are being outfitted with modern combat equipment and weapons created on the basis of the latest accomplishments of scientific-technical progress. The most sophisticated electronics and automation are enjoying increasingly wider use in military affairs. Equipment and armament reaching the troops is growing continually more complex. Many models have become entire systems, with soldiers of different specialties responsible for their operation. These trends will not only persist in subsequent years, but they will also enjoy further development.

But no matter how sophisticated fighting vehicles, armament, instruments and automatic systems become, this does not diminish the role of the individual in modern combat, inasmuch as armament cannot guarantee successful fulfillment of missions on its own. People who can use the equipment entrusted to them proficiently are the main factor. This is why it is important for the troops to assimilate new weapons models in short time, and for the personnel to develop firm habits of their operation.

Mastery of new equipment and the ability to correctly check it out, to adjust and tune it, to service and repair it is not a simple process. We know that officers receive the knowledge they need in higher military schools and academies as well as in special advanced training courses. Through such study they not only learn the workings of their materiel but also acquire firm habits of its operation and use in combat.

But when a unit is armed with equipment with which the officers had not been previously acquainted, the senior chief issues the appropriate orders for mandatory additional training. Lessons and exercises are conducted in such training under the guidance of well-trained specialists, and with the appropriate materials and equipment. In all cases the officers are obligated

to pass final examinations and earn the authorization to operate the particular model independently.

Junior specialists (detachment and crew commanders, driver-mechanics, operators, repairmen and so on) study organic equipment in training units (centers, schools), where depending on their future assignments and specialties they receive the necessary knowledge and habits of working with this equipment and using it in combat. All other crew (detachment) members train under the guidance of their immediate supervisors in a separate program.

Armament and equipment can be assimilated well by personnel and they can learn to use it competently in short time only if very specific conditions are met. First, all lesson leaders must be well prepared, and they must possess good teaching skills. Then the necessary classroom and field training materials and equipment must be available, including trainers. And finally, the training programs must be fulfilled strictly, practical exercises must be conducted systematically, and socialist competition must be well organized.

As we know, new equipment is assimilated in ground troop units and subunits on the basis of specially written plans approved by senior supervisors. In addition to lessons, exercises and fire training, these plans foresee an entire complex of measures associated with party-political work and with technical and material support. And the times and places for carrying these measures out and the persons in charge are indicated in these plans. Also, plan fulfillment is strictly monitored.

Practical lessons in training directed at fulfilling the standards are believed to be the principal method of studying materiel. The main attention is devoted in this case to getting the soldiers to develop solid habits in work with armament and equipment, to carrying out the practical work of preparing armament for combat use, and to teaching the crew (driver) to service the equipment, correct defects and perform current repairs in the field.

Periodic purposeful tests have recommended themselves well. They not only help to reinforce obtained knowledge and habits, but they also force the students to improve themselves constantly.

The soldiers deepen their knowledge of the materiel and the rules of its operation in the course of independent work as well. But independent work can fulfill its role only in the event that it is not left to its own resources. Good organization is a must in this important work. Besides the necessary literature and training aids, officers, warrant officers and other specialists must have specialized classrooms, trainers and equipment available. This equipment must be used in accordance with the combat training plans, and with regard for needs stated by the subunit commanders.

Tactical (specialized tactical) exercises involving field firing, missile launches and fulfillment of the corresponding missions make up the concluding stage of assimilation of new armament and equipment. It is precisely at this

time that the preparedness of subunits and units for fulfilling combat (special) missions in different situations and their ability to organize and provide technical support in the field are tested.

Thoughtful staffing of subunits possessing new equipment by officers, warrant officers and NCOs has great significance. After all, it is difficult to overstate the significance of the commander's personal example in assimilation of new equipment. Appeals to the soldiers to deeply study their fighting vehicles and weapons would be meaningless unless the commander is himself familiar with the equipment. And on the other hand, a commander who has become a top-class specialist, and all the more so a master of combat qualification, is an unquestionable authority in the eyes of his subordinates. They imitate him, and measure their knowledge, habits and deeds against his own.

We can cite many examples of purposeful and effective work by commanders, staffs and technical support organs in the planning and implementation of all kinds of measures that must be carried out when the troops receive improved equipment. Thus the units and subunits in which V. Zubkov, I. Naumenko, N. Petruk and I. Sakun serve have accumulated valuable experience in this respect.

Despite the fact that it is so extremely necessary for the personnel to have a plan for studying new equipment, the headquarters of a certain unit of the Ural Military District did not have one. Some supervisors--for example Lieutenant Colonel V. Ponomarenko and Major P. Tarasov--were unable to clearly plan and organize the work of subordinates so that they could complete their assigned tasks.

Management of the operation of armament and equipment, including its use, maintenance, transportation and storage, is a complex and important facet of the work of commanders, political organs, staffs and deputy commanders for armament. Equipment operation is planned by the chiefs of special troops and technical services in compliance with requirements of the minister of defense and the commander in chief of the ground troops, and on the basis of combat and political training plans. In order that the plan for operating organic equipment could be fulfilled successfully, and in order that its combat readiness could be maintained, all commanders and chiefs must keep this issue constantly within their field of vision, and exercise strict control over the quality of maintenance and repair.

We must always remember and unfailingly observe the requirements of the Internal Service Regulations of the USSR Armed Forces imposed on officials in regard to their knowledge of the materiel and its use, storage and preservation, and in regard to inspecting the armament, combat equipment and other materiel of the subunit and unit. These requirements apply both to platoon, company, battalion and regiment commanders and their deputies on one hand, and to the chiefs of the arms and services on the other. Special emphasis must be laid on the personal responsibility carried by every commanding officer and specialist for carrying out all of these tasks efficiently.

One of the main components of the combat readiness of the units and subunits is to keep combat equipment and weapons fully serviceable. As a rule motorized infantrymen, tankmen, missilemen, gunners and other specialists competently operate and care for the equipment, and service it competently and promptly. On the whole, the soldiers are successfully carrying out the task of learning to get everything they can out of the equipment and armament, and to utilize the potentials of rocket launchers, tanks, infantry fighting vehicles, guns and antiaircraft complexes fully and effectively in combat. This can be said with full justification of, for example, the units and subunits in which officers V. Medvedev, N. Skobelkin, V. Yurpolskiy and F. Yaloznitskiy serve.

But things are not like this everywhere yet. In particular the organization of the use, maintenance and storage of combat and other equipment in the units in which officers I. Belorukov, V. Kopunnikov and B. Prikhodko serve leaves something to be desired. This is a direct consequence of both failures in planning and untimely, poor maintenance. Sometimes some personnel are excused from work on the equipment on motor pool days and on motor pool and housekeeping days. As a result some of the materiel remains unserved, and it is run into the ground.

It is impossible to maintain armament and equipment in constant combat readiness in the units and subunits of any branch of troops without well-outfitted motor pools and without maintaining strict order in them. This is why people locally display so much creativity, diligence and persistence in equipping motor pools appropriately. Each year the ground troops conduct a competitive review for the best unit motor pool. Last year's winner was the motorized infantry regiment in which officers V. Nikolayenko and S. Dmitriyev serve (Moscow Military District). The regiment was awarded a perpetual prize, and the personnel were rewarded by the commander in chief of the ground troops.

Military-technical propaganda plays a great role in instilling a love in the personnel for the weapons and equipment entrusted to them and an ability to operate this equipment well. It also plays a great role in raising the technical and fire skills of the soldiers. Positive experience with it has been accumulated in many units of the Carpathian Military District, the Group of Soviet Forces in Germany, the Baltic Military District and the Leningrad Military District.

Military-technical propaganda is organized in these units consistently and with consideration for local needs, it is tied in closely with combat training, and it is a significant supplement to the latter. Much is being done to generalize and publicize the experience of masters of military affairs and outstanding soldiers of combat and political training. A persistent struggle is being waged to reduce the standards for maintaining and repairing equipment and weapons, and to increase the time of equipment operation between repairs. The arsenal of the forms and methods of this work is diverse--discussions, bulletins, training films, fire and technical conferences, study circles and quizzes. Competitions for best specialist (crew) of the unit are held in each training period. These competitions include practical work with

organic equipment and armament, they require fulfillment of certain standards, and all faults are determined and eliminated.

The time and quality of assimilation of equipment entering the troops depends to a significant degree on the aggressiveness of party and Komsomol organizations, and on their struggle for effectiveness of each lesson and exercise, for competent operation and exemplary maintenance of armament and equipment, and for a thrifty attitude toward it. Intolerance of shortcomings and laxity in training and strict punishment of communists and Komsomol members for poor knowledge and for shortcomings in maintaining combat equipment and armament are typical of the work style of many of them today.

Displaying firm resolve for peace, and waging an untiring struggle to preserve and develop detente, the CPSU and the Soviet people are showing untiring concern for strengthening the defense capabilities of our socialist motherland. Surrounded by the whole people's love, the Soviet Armed Forces are improving continually, and their fighting power is growing. Teaching subordinates quickly and effectively to competently handle weapons and equipment, and maintaining fire and technical training at the level of modern requirements are the primary duties of commanders, political workers, staff officers, party and Komsomol organizations, and all who are entrusted with training and indoctrinating the personnel, and whose work puts them in direct contact with weapons and equipment.

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## UNITY OF RIGHTS AND RESPONSIBILITIES

Moscow VOYENNNY VESTNIK in Russian No 10, Oct 86 pp 5-8

[Article by Col A. Ivanov, Cand Phil Sci L. Skornyakova: "Unity of Rights and Responsibilities"]

We are now living peacefully and securely in a world of socialism, one which has made the man of labor the master of both his fate and that of the country. Sometimes we do not even concern ourselves with how democratic our society is by its own nature. The USSR Constitution, which was adopted on 7 October 1977 after it was discussed by all the people, guarantees great rights and freedoms to us all. Among them are some that are most vital: the right to work, the right to leisure, public health, material support in old age and in the event of illness, the right to housing and education, and others.

It was in democracy, in the living creativity of the masses that V. I. Lenin saw the main force of development of the new structure. "The crux of the issue," Vladimir Ilich pointed out, "is that the conscious worker must feel himself not only to be the master of his plant, but also a representative of the country, that he must sense that he bears responsibility" ("Poln. Sobr. Soch." [Complete Collected Works], Vol 36, pp 369-370).

Today, Soviet society is one of real democracy, of respect of the merits and rights of citizens, a society in which citizens bear high responsibility. Participation of the laborers in the affairs of their country and their collective is becoming increasingly wider and more active, and the system of the people's self-government is improving. Our minds are centered today on affirming the spirit of the 27th CPSU Congress everywhere, on acceleration. This presupposes further development of socialist democracy in all of its aspects and manifestations as well. The main prerequisite of improving Soviet democracy and developing socialist self-government of the people is to strengthen the leadership role played by the CPSU.

The party is doing much to deepen the democracy of the socialist structure. The CPSU directly associates implementation of its political course with further growth of the role of soviets of peoples deputies. As was emphasized in the CPSU Central Committee's political report to the congress, they can and must become one of the most effective factors for mobilizing the masses toward acceleration of the country's socioeconomic development. The Presidium of the USSR Supreme Soviet resolved to assume unflagging leadership and to execute

the decisions of the 27th CPSU Congress, and it defined the tasks of the soviets of peoples deputies.

Measures to activate the soviets, trade unions, the Komsomol, labor collectives and peoples control, to intensify openness, to maintain a course toward socialist self-government of the people, and to encourage effective use of all forms of direct democracy, such that people could influence development and adoption of decisions more actively, are all manifestations of the deepest respect for the personality of the Soviet citizen, and of faith in his creative forces.

"Free development of each is the condition of free development of all": It is in compliance with this communist ideal that the state has made it its goal to widen the real possibilities citizens have for utilizing their creative forces, capabilities and gifts, and for comprehensive development of the personality. No matter what article of the USSR Constitution dealing with the rights and freedoms of citizens we look at, besides stating what possibilities are granted to citizens, they necessarily indicate the measures by which to support these possibilities.

In particular the right to work is supported by certain guarantees--choice of profession, type of occupation and work in accordance with one's calling, capabilities, occupational training and education, and with regard for social needs and for the right to free occupational training, to raising one's qualifications and to learning new specialties.

Consider this: choice of profession, type of occupation and work in accordance with one's calling, capabilities.... In what other era, in what other structure could these have been included in constitutional acts, and reflected in the list of the most important human rights? The socialist structure ensures continuous expansion of the rights and liberties of citizens, and continuous improvement of the people's living conditions as the programs of socioeconomic and cultural development are fulfilled.

A press conference for Soviet and foreign reporters on the subject "Real Socialism: Democracy, Human Rights, International Cooperation" held at the end of last year in Moscow comes to mind in this connection. Hero of Socialist Labor M. Poleshchuk, a weaver at the Moscow Order of Lenin Silk Combine imeni P. P. Shcherbakov, was present at this press conference as a member of the Committee for Soviet Women. One of the foreign reporters asked her: "How do you feel about women's rights in the Soviet Union--are they token, or are they real?"

It was not difficult for her to answer the reporter's question: The example of her own personal life--an ordinary life, just like that of millions of Soviet people--persuasively confirms the fact that our rights are real, and not token.

M. Poleshchuk was born to a large peasant family in a certain town in Lotishinskiy Rayon, Moscow Oblast. She was only able to finish 6 years of school before the Germans invaded our country. The fascists burned down her family's home. During the war she was forced to learn what hunger is. Fall



'forty-five found the young girl in Moscow. She was admitted to the factory training school of the silk combine. She studied, worked and lived in the shop, which was furnished with a hundred beds. They had more than their share of difficulties, but they lived amiably. They dreamed of a happy life, and through their labor they tried to come closer to it.

"I am indebted to my country for all that I have, for all that I have achieved," M. Poleshchuk said in reply. "I have been working in the combine for 40 years, and never in this time have I ever worried about losing my job. I am the mother of two children, a grandmother, and a weaver, and still I have time for social work."

She went on to cite figures proving that equality in the Soviet Union is real. In particular, last year there were 59,670,000 women among the country's blue and white collar workers. That is 51 percent of all workers. Wages do not depend on sex in our country. A woman, be she a laborer, engineer, a physician, or a teacher, receives the same pay as men. The only wage differences are those that depend on longevity and position.

Here are a few more facts. There are 492 woman deputies in the USSR Supreme Soviet. That is 32.8 percent of the supreme organ of state government. There are almost 1,160,000 women in local soviets of peoples deputies--50.3 percent of the total number of deputies.

One thousand three hundred fifty-two women were elected deputies to the 27th CPSU Congress, which was 27 percent of all delegates representing the 72 nations and nationalities of the Country of the Soviets.

Women in the USSR are now awarded old-age pensions when 55 years old. Compare this with an age of 63-65 years in the USA, the FRG, the Netherlands and Sweden, and 67 years in Norway. American legislation contains 1,100 laws infringing upon women's rights. A woman in Italy receives half a man's wages for the same work. Women in Great Britain, Ireland, Luxembourg and other countries receive only two-thirds of the wages of men. In Japan, the difference between the wages of women and men reaches 50 percent.

Women are still not allowed to vote at all in 38 countries.

Every reader of this journal has a mother, a wife or a sister, and therefore just from our solution to the "female question" he can be persuaded of the indisputable advantages of socialist democracy. Life itself and practical experience support this conclusion.

Concerning themselves for comprehensive development of the personality and citizens' rights, the socialist state and the party are concurrently devoting due attention to tightening social discipline and to compliance of all citizens with their responsibilities before the state. Protecting the socialist fatherland is the most important among them.

Exercising all rights but also fulfilling all responsibilities unswervingly is the inviolable principle of socialist democracy, a principle of the unity and interconnection of rights and responsibilities. Expounding on this principle,

the USSR Constitution imposes, upon all citizens without exception, the responsibilities of following the laws, respecting the rules of socialist community, working conscientiously, preserving and strengthening socialist property, protecting the interests of the Soviet state, promoting reinforcement of its power and authority in all possible ways, defending the socialist fatherland, bearing the name of USSR citizen with merit, and others.

The ideologists of imperialism are exerting a great deal of effort to disgrace our political system and to distort the essence of socialist democracy. These attacks have grown especially intensive in recent times; they have essentially become one of the main directions of anticommunist propaganda, which is trying to discredit socialist popular rule.

They are trying to portray the state's natural demand that each of us work conscientiously in our selected area of socially useful activity as some kind of violation of democracy and an infringement of the individual. Vain are the attempts of the liars and falsifiers!

It was only in the conditions of our society that the new type of individual could have developed--one who is a truly free and equal participant of decisions having to do with the country's destiny, and consequently his own destiny, an individual capable of energetically and thoughtfully tackling the revolutionary, historically predicated effort to accelerate the country's socioeconomic development, so vitally necessary to both the state and the individual.

There is no need to elaborate on all of the specific measures and legal sanctions directed against negative phenomena alien to socialism and for strict fulfillment of the fundamental principle of socialism--"From each according to abilities, to each according to his labor," which has undergone noticeable deformation in a number of the sectors of the national economy in recent years. The Communist Party appealed to the Soviet people to fight against all that is incompatible with our morality, with our principles and with the fundamental tenets of the socialist home, since the moral criteria of Soviet society are inseparable from its democratic principles: They supplement and enrich each other.

Military legislation was updated significantly in recent years. Thus in 1980 a ukase of the Presidium of the USSR Supreme Soviet amended the military regulations of the armed forces with the purpose of stating the rights and responsibilities of servicemen more clearly.

The USSR Law on Universal Military Service turns attention to the fact that according to the USSR Constitution, protection of the socialist fatherland is among the most important functions of the state, and it is a matter of all the people. It is the duty of the USSR Armed Forces before the people to dependably protect the socialist fatherland and to be in constant combat readiness guaranteeing an immediate repulse to any aggressor.

The amendments also affected the content of the rights and freedoms of servicemen, and they expanded the privileges associated with military service. In particular the time of their active military service is counted as time of

work in their specialty, on the condition that within 3 months after their transfer into the reserves (within a longer period if extenuating circumstances allow) they get a job in the specialty acquired before enlistment.

Servicemen discharged from active military service enjoy advantages in gaining admission to institutions of higher education, and those rehired at their previous place of work are entitled to receive material assistance on priority.

The solidly backed rights of military service mobilize all servicemen to fulfill their military duty faultlessly and promote reinforcement of socialist democracy in the armed forces. They are an important means of organizing and ensuring proper and necessary behavior of servicemen in the interests of protecting the socialist fatherland.

A soldier in our army is a citizen of socialist society possessing the entire range of socioeconomic, political and personal rights and freedoms declared and guaranteed by the USSR Constitution and by Soviet laws.

Being a part of the Soviet people, our army lives the same life with them, the same thoughts and concerns. Soviet soldiers actively participate in practical solution of the most diverse problems of economic and cultural development. Over 14,500 servicemen are deputies of elected local and supreme government organs. Thousands of soldiers participate in the work of permanent commissions under the soviets, they maintain intimate ties with the activities of labor collectives, and they actively participate in military-patriotic indoctrination of the growing generation and in sponsorship work.

In addition to this, it is important to emphasize that there are some unique features to the way soldiers exercise their rights and responsibilities in the army. Rights are regulated more rigidly by the objective needs of protecting the socialist fatherland and by the unique features of military service, and they are accompanied by higher responsibility of each serviceman for unfailing fulfillment of the laws.

Observance of military legal rules is based not so much on the possibility for using forms of state compulsion as on the moral authority of Soviet military legal acts, on the deep internal conviction of Soviet soldiers in the wisdom and suitability of principles reflecting the objective need for protecting socialist accomplishments.

The classics of Marxism-Leninism felt that compulsion is a necessary social element of any social structure. Therefore by establishing various forms of sanctions for violating the requirements of the oath and the regulations, military legal rules have a disciplining effect on soldiers, they compel soldiers to fulfill their military duty if a need for this arises, and they nurture responsibility.

A soldier cannot look at combat and political training as his own personal business: He cannot make choices as to whether he wants to perform or not. Military service and combat training are a national duty for which soldiers

bear responsibility before their people. And while duty is prescribed by law, instilling responsibility is the task of officers. Enormous significance is attached in all of this complex work to the authority of the officer himself, to his personal example in fulfilling military duty, to responsibility for one's assigned area in work and service.

Today's young soldiers represent a generation which will have to implement the designs of the 27th CPSU Congress after being transferred into the reserves. Life demands that they be trained at a high professional level, that they assume responsibility boldly and willingly, and that they learn to finish what they start. And it is extremely important to subordinate the entire process of service and training to shaping deep ideological convictions, socialist consciousness and high moral and combat qualities in the soldiers.

A widely branching personnel political training network has been created and is now operating effectively in every subunit and unit, and diverse, proven forms and methods of ideological work, political indoctrination and mass cultural work are being employed.

It is an immutable truth that soldiers, NCOs and officers develop and their fighting qualities take shape more productively wherever the rights of the individual and his responsibilities are accounted for in a better way. Belittling a soldier's personal merit and his rights on one hand and rendering responsibilities absolute on the other irreversibly cause a decrease in consciousness, responsibility and military discipline. This is why it is important to do everything to maintain a spirit of unity and an atmosphere of mutual exactingness, intolerance of all deviations from the rules of communist morality and from the requirements of the military oath and military regulations in the army collectives. Only this approach will make it possible to effectively and properly fulfill the tasks posed by the 27th CPSU Congress.

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## ACROSS A WATER OBSTACLE ON THE MOVE

Moscow VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 9-12

[Article by Maj I Selyuk, Motorized Rifle Battalion Commander; Capt Ye. Shepel, Chief of Staff, Motorized Rifle Battalion, Odessa Military District: "Across a Water Obstacle on the Move"]

The stillness before the dawn was suddenly disturbed by a powerful artillery cannonade. Hundreds of gun and mortar shells rained upon the opposite bank of the river. The simulated enemy positions were enwreathed with smoke and dust.

A little while later, helicopters appeared from out of the trees. They crossed the water obstacle and landed in the simulated enemy defenses. The assault troops attacked surviving strongpoints. Artillery then resumed fire to keep the defenders from bringing up reserves and annihilating the assault force. But the situation in the region of combat activities of the tactical airborne assault landing grew gradually more complex.

A moment later the roar of engines could be heard, and infantry fighting vehicles rushed to the river in two columns at maximum speed. The motorized riflemen hurried to the aid of the assault forces. Losing not a single second, they forced the obstacle on the move. In the meantime tankmen occupied a line on the near bank, from which they suppressed detected targets with their guns. Some companies were on the opposite bank by now. The battle gradually moved farther away. Now it was the turn of soldiers of the combat engineer subunits to play the main role here by the river. They prepared assault crossing and ferry resources quickly and skillfully. A little more effort, and all subunits of the forward detachment would be on the west bank together with their attached resources.

This sketch of a combat training exercise in capturing a beachhead is but one episode in an exercise conducted by the 3d Motorized Rifle Battalion commanded by Major Yu. Karpenko. We will examine in greater detail how preparations were made to force the water obstacle and how the crossing went.

As of 1000 hours on 5 August the situation was as follows. Our troops had started their offensive in the morning of 3 August. In 2 days of fighting they were able to break "enemy" resistance, cross the forward defense area security zone and the main defenses, and move the combat activities deep into enemy territory. The positions of the sides are shown in the diagram. A motorized rifle battalion held in reserve attained the southern outskirts of

Osipovo. It was at this time that operational instructions reached Major Karpenko, who learned the following:

"The enemy, who is engaging in delaying actions on a line between Hill 150.0 and Beltsy, is attempting to win time and set up defenses on the west bank of the Golubaya River. He is moving reserves up from the rear with this purpose in mind. At 0930 hours on 5 August our aviation struck two columns of motorized infantry escorted by tanks and artillery 60 km west of Strelino.

"The forward detachment consists of the 3d Motorized Rifle Battalion supported by a tank regiment, an artillery battalion, isv [not further identified], a tracked amphibian carrier platoon, a tracked self-propelled ferry platoon and a separate radiological and chemical reconnaissance company. Its mission is to avoid protracted combat before the water obstacle, reach it swiftly, and cross it on the move in the sector between Monino and Grusha Grove (isk [not further identified]). It is to annihilate the enemy on the opposite bank in the vicinity of Hill 111.1, Burial Mound 3.5 and Dubki, and capture a line between the dirt road intersection and Khvoynaya Grove by 1330 hours. It is to hold the captured beachhead and support the crossing of the main forces.

"The direction of advance will be from Osipovo to Berezki to Alekseyevka.

"Reinforcements will arrive at Figurnaya Grove at 1030 hours on 5 August."

The battalion commander also knew that a tactical airborne assault landing force (a motorized rifle company) was landed 1.5 km south of Dubki at 1240 hours.

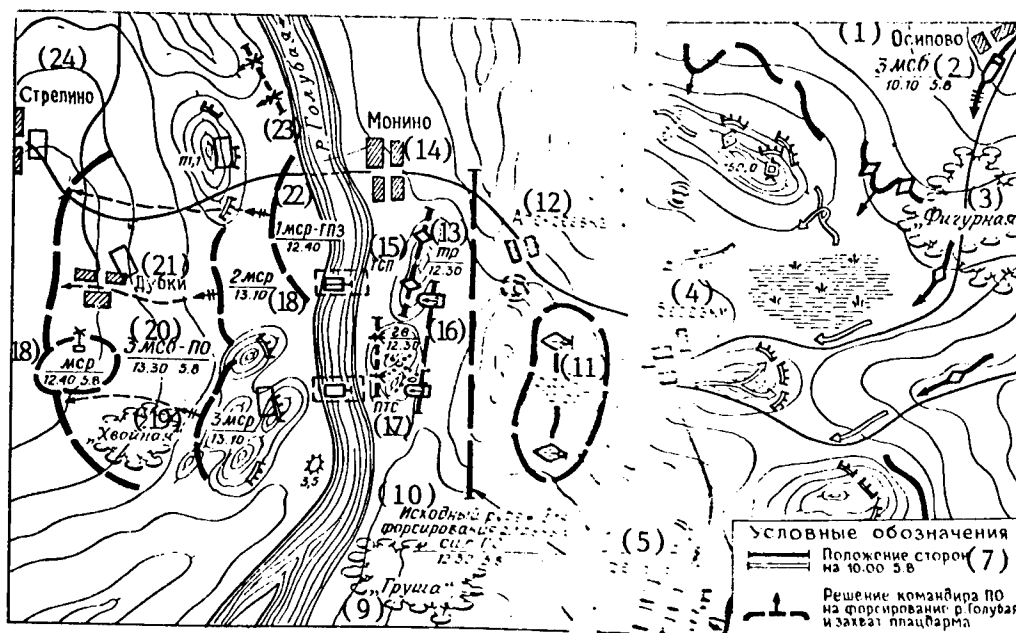
It should be noted that even before preparations for the offensive were made, the senior chief used a terrain model to examine in detail all problems concerned with interaction between the forward detachment and the tactical airborne assault force. Consequently only some minor details had to be ironed out at this time.

Air support was planned for the detachment and the assault landing force. A helicopter flight was assigned to this task, and Major Karpenko relayed the flight its mission through the air support controller.

As we know, the principal measures carried out in a battalion in preparation for a crossing are: sending a reconnaissance patrol to the water obstacle; planning; assigning missions to subunits; organizing coordination, control and comprehensive support. We will dwell briefly on some of them.

The reconnaissance patrol establishes the composition, parent unit, position and plan of the enemy within the zone of operations of the forward detachment on both banks, and the nature of the water obstacle and surrounding terrain. The number of reconnaissance units sent to the river is determined by the situation and by the magnitude of their missions.

One thing positive in our example is that a combat reconnaissance patrol was sent out from the battalion under the command of Senior Lieutenant Yu.



Key:

- |   |  |
|---|--|
| 1. Osipovo  | 13. Tank company                                     |
| 2. Motorized rifle battalion  | 14. Monino   |
| 3. Figurnaya  | 15. Tracked self-propelled ferry                     |
| 4. Berezki  | 16. Rocket launcher platoon                          |
| 5. Beltsy   | 17. PTS amphibious transporter                       |
| 6. Symbols  | 18. Motorized rifle company                          |
| 7. Positions of the sides at 1000 hours, 5 August   | 19. Khvoynaya  |
| 8. Decision of the forward detachment commander to cross Golubaya River and seize a beachhead | 20. 3d Motorized Rifle Battalion--forward detachment |
| 9. Grusha   | 21. Dubki  |
| 10. Start line for crossing by main forces of the forward detachment                          | 22. 1st Motorized Rifle Company--advance party       |
| 11. Self-propelled artillery battalion  | 23. Golubaya River                                   |
| 12. Alekseyevka   | 24. Strelino   |

Shevtsov as early as at 1020 hours. The patrol consisted of a motorized rifle platoon and scouts from artillery and engineer subunits, who were to join the motorized riflemen in Figurnaya Grove. A detachment from the platoon conducted radiation and chemical reconnaissance. The scouts had to acquire information on the "enemy" defenses at the approaches to the obstacle and on the opposite bank, determine the width, depth and flow rate of the river and the nature of its bottom, and find convenient places to set up assault and ferry crossings by 1200 hours. The plan was to allocate one more combat reconnaissance patrol under the command of Senior Lieutenant V. Gain to reconnoiter the opposite bank as soon as the forward detachment reached the river.

But scouts are not always able to cross a river unobserved. In cases such as this, would it be advisable to send at least one motorized rifle detachment from the forward detachment together with the assault landing force, with the consent of the higher staff, in order to reconnoiter the enemy on the opposite bank and his approaching reserves? Without a doubt this is a debatable question, and it requires some analysis. But one thing is clear: No matter what the circumstances, information acquired by battalion reconnaissance would be the most desirable and most dependable to the commander, since it is obtained "first hand."

The commander of the forward detachment carried out his planning in the course of advance to the water obstacle in such a way that all preparations for the crossing would be finished by the time the advance party reached the river. Major Karpenko spent 10 minutes on the planning. It took around 15 minutes to assign the missions to the subunits and organize their coordination, and 10 minutes to organize comprehensive support.

And so, the officer spent 35 minutes to organize the crossing--that is, by 1040 hours the commanders of organic and attached subunits already knew what they were supposed to do, and when.

Now a few words about planning fire strikes at the "enemy." Major Karpenko attached special significance to this question. It was no accident that he included gunners together with their reconnaissance resources in the combat reconnaissance patrol. The mission of the latter was to reveal targets and objectives to be suppressed by artillery. An attached battalion and an organic mortar battery were to fire from covered fire positions, and a tank company and rocket launcher platoon were to move closer to the water line, occupy fire positions and annihilate targets by direct fire.

The motorized riflemen were to advance to the water and cross it under the cover of artillery fire. To ensure continuity of artillery support to subunits fighting on the opposite bank, the officer planned to have the artillery battalion cross first. Nor did he forget about combat helicopters: He coordinated the time and place of their operations with artillery fire.

The battalion commander's plan was approximately this:

"Concentrate the main efforts in the direction of Alekseyevka and Dubki.

"Capitalizing on the results of artillery fire, strikes by combat helicopters and the actions of the tactical airborne assault force, cross Golubaya River on the move in the sector between Monino and Grusha Grove. Annihilate the enemy on the opposite bank in the vicinity of Hill 111.1, Burial Mound 3.5 and Dubki in coordination with the assault force. Capture a line extending from the dirt road junction to Khvoynaya Grove by 1330 hours. Firmly hold the captured beachhead and thus create conditions favoring the crossing of the main forces.

"Support swift advance of motorized rifle subunits to the river, its crossing and combat on the opposite bank by fire from the artillery battalion, the mortar battery, and the tank company and rocket launcher platoon assigned to



direct fire.

"The combat formation is to be organized into a single echelon. The reserve will consist of the 3d Motorized Rifle Platoon, 3d Motorized Rifle Company and the 1st tv tr [not further identified]."

The missions of the subunits are indicated in the diagram. We will note only that the plan was to initially have the advance party (a motorized rifle company, a tank platoon, a self-propelled artillery battery) cross the Golubaya River after first annihilating the "enemy" subunit on the near bank. Capitalizing on the combat results of the advance party and using smoke, the main forces of the detachment were to cross the water obstacle on the move, join up with the tactical airborne assault force and capture the intended line together with it.

The officer foresaw preparing two crossings in the crossing sector: an assault crossing centered on a PTS amphibious transporter, and a ferry crossing centered on a tracked self-propelled ferry. The tracked self-propelled ferry was to cross the tank company, and the PTS amphibious transporter was to cross the mortar battery and the rifle battalion and artillery battalion rear services.

The sequence in which the subunits would cross the water obstacle was thought out carefully. After the motorized rifle companies secured their positions on the west bank, the artillery battalion was to begin crossing a battery at a time. Concurrently ferries were to cross the tank company, and amphibious transporters were to cross first part of the rear services (four ammunition vehicles, one POL vehicle and the battalion medical station), and then the mortar battery and the last remaining rear services.

Ending our discussion of the preparations for the crossing, we must not forget to say a few things about organizing comprehensive support. The commander and staff foresaw a number of measures to protect against mass destruction weapons and against high-precision weapons. For example the battalion organized radiation and chemical reconnaissance, created an obstacle clearing group, planned to make wide use of smoke when crossing the water obstacle, and turned attention to revealing nuclear mines and chemical bombs by the river and annihilating them immediately. In addition the subunits prepared organic and makeshift resources with which to control the consequences of the enemy's use of chemical and incendiary ammunition.

The main forces were protected by forward and rear march security patrols and by patrol detachments on the flanks of each company.

Major Karpenko foresaw technical and rear support measures. In particular he determined expenditure of ammunition and fuel for the day of combat and the minimum reserves. The battalion rear services were to advance behind the fighting subunits ready to replenish their materiel, render aid to casualties and evacuate damaged equipment.

How did the events unfold? The forward detachment swiftly advanced to the river, avoiding major "enemy" strongpoints encountered along the way. At 1130

hours the commander of the combat reconnaissance patrol sent the message that trenches were being dug at the eastern outskirts of Monino and Alekseyevka. A platoon was going over to defense in each population center. Defensive fortifications were being constructed on the eastern slope of Hill 111.1 as well. He also reported that the most convenient place for the crossing, besides the ford at Monino, was the sector between the bushes and Grusha Grove. The following information was transmitted simultaneously from higher headquarters: Two columns of motorized infantry supported by tanks and artillery, each 7-8 km deep, were moving toward the river 25 km west of Strelino.

Major Karpenko quickly evaluated the new information and reached the proper conclusions. The main thing the "enemy" was trying to do was to cover the dangerous Monino-Strelino direction. It was to this region that he was advancing his reserves in haste. Therefore although there was a ford in this region, a convenient place for crossing the river, it would not be suitable to send the forward detachment into it. There was the danger that doing battle with covering subunits on the near bank would mean a loss of time. If this were to happen, the defenders could manage to bring reserves up to the river and assume defenses. That was the first conclusion. The second was that there was a possibility for maneuvering, crossing the water obstacle north of Grusha Grove and attaining the flank of the deploying reserves.

The officer radioed the details of the missions of the advance party and the rest of the subunits of the forward detachment, which began fulfilling them immediately. On orders from Major Karpenko, by successively annihilating the covering subunits and fighting for the ford, the advance party created the illusion in the "enemy" that this would be where the attackers would cross the Golubaya River. Thus it was no accident that all of his advancing reserves were sent to the region bounded by Strelino, Hill 111.1 and Dubki.

The tactical airborne assault force was landed as planned, 1.5 km south of Dubki at 1240 hours. Destroying a small "enemy" subunit in the population center, the motorized infantrymen assumed defenses on its western and southwestern outskirts. The road leading from Strelino to the river was covered, which persuaded the "enemy" even more as to where the crossing was to occur. By 1300 hours the airborne troops were already encircling the enemy.

At this time the main forces of the forward detachment reached the river in the sector between the bushes and Grusha Grove. Two motorized rifle companies crossed the water obstacle on the move, they annihilated small "enemy" groups on the western slope of an unnamed hill without unusual losses, and they began advancing swiftly toward the flank of the enemy's deploying reserves.

Appearance of new motorized rifle subunits on the west bank--from another direction moreover--was a complete surprise to the defenders. Finding themselves in a disadvantageous position and suffering "losses" from the combat helicopter strikes and artillery fire, they retreated in the direction of Strelino.

The advance party defeated the "enemy" in Monino, and then, fording the Golubaya River, it attacked Hill 111.1. By 1330 hours basically all of the

forward detachment was on the west bank, it joined up with the tactical airborne assault force and went over to defense on a line extending from the dirt road junction to Khvoynaya Grove. All that remained was to hold onto the captured beachhead.

The motorized riflemen were not finished digging in before a powerful counterattack occurred. Around two battalions and over 20 tanks supported by artillery fire and aviation tried to throw the forward detachment back into the river. But they were unable to do so.

Following the orders of the battalion commander, the combat helicopters were the first to strike the "enemy." Then the artillery battalion and mortar battery inflicted tangible "losses" on him. As the counterattackers came closer to the forward edge, increasingly larger numbers of fire weapons went into action. Major Karpenko competently maneuvered his subunits as well. Thus when the "enemy" penetrated defenses north of Dubki, he committed his reserve (a motorized rifle platoon and a tank platoon) to combat and transferred another motorized rifle platoon from the left flank, where the position was more stable, to the dangerous direction. In addition he concentrated the fire of the entire artillery battalion there. As a result he was not only able to restore the defenses but also push the "enemy" back and widen the beachhead.

The forward detachment completed its mission. Utilizing the captured beachhead, the main forces crossed to the west bank uneventfully and continued their advance without slackening the pace.

This tactical exercise demonstrated the improvements in the field skills of the personnel. It was evident that the motorized riflemen, tankmen, and gunners possess good habits in surmounting a water obstacle on the move and in solving suddenly arising problems. It was once again confirmed in this exercise that under otherwise equal conditions, a commander who orients himself well in a situation, who maneuvers subunits and fire energetically, who can make competent decisions quickly and who assigns clear missions to subordinates will be successful.

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CSO: 1801/79

AT LOW RPM

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86, pp 13-17

[Article by Col V. Rudoy: "At Low RPM"]

[Text] The NCO is the principal character of the detachment and crew. It is precisely on him that army order, military discipline, organization and the combat readiness of the lowest level of the military collective is based. The Ural Military District training unit described here prepares such junior commanders, as well as gunners, driver-mechanics and other specialists. It was recently visited by a group of officers from directorates of the commander in chief of the ground troops. Their purpose was to help the command complete the tasks posed to it for the training period, to delve deeply into the training process and into the life and personal affairs of the personnel, and to determine the teaching skills of the officers, NCOs, instructor mechanics and other categories of instructors. And in the final analysis they had to help the commanders of the training battalions, companies and platoons to prepare and conduct lessons correctly from a methodological point of view (this was their main task).

Consequently the word "inspection," where inspectors only record shortcomings disinterestedly, without doing anything to improve the situation, was inappropriate in this case. At least because within the short time of their work the officers from the directorates helped commanders of training subunits and staffs to prepare and conduct over 20 demonstrations, instructor training lessons and so on.

The time students train is short, and the training program followed by the training subunits is as packed as a full machinegun belt. Each day means a new discipline, a new lesson topic. And all of these things are important and necessary to the future junior commanders and specialists. Such a program can be completed only on the condition that the officers and NCOs are well prepared as instructors, and that the training process is intensified. The reason for this is that attention is focused mainly on making maximum use of

training materials and equipment, especially trainers, in the course of lessons and exercises, and on the ability of commanders and staffs to manage the training process, and to organize and conduct methodologically proper lessons in the principal subjects of study--tactical, fire and technical training.

A well organized system for training junior commanders and specialists has evolved in the units and subunits. It is conditionally divided here into several stages. Immediately after arriving in the subunit but before the training period starts, the new students attend lessons in which they improve their basic military training obtained prior to the army. The novices are acquainted with the general responsibilities of servicemen and the rules followed in communication with each other, with the rules of internal order in the unit, with the uses and combat characteristics of the assault rifle, and with the simplest techniques and exercises of physical education. They are assisted to recognize that military service in the armed forces is an honorable duty of USSR citizens.

Then the students undergo individual training (in the first few weeks of the training period). This training is conducted on the basis of the same program irrespective of future specialty. Permanently assigned officers and NCOs make sure that during this time the students learn the responsibilities of a soldier in combat, the workings of the assault rifle and the rules of using it, and the general layout of the weapons with which the detachment is armed. The students must assimilate the tactics and independent actions of a soldier in offense and in defense, and learn to hit motionless and suddenly appearing targets with their personal weapons.

Concurrently the physical, moral, political, psychological and organizational qualities of the students are studied comprehensively, and these qualities are taken into account when students are selected for advanced training in their specialties. At the end of their individual training the students undergo a major examination in the course of a field exercise at the subunit level.

It was at the end of this stage, about a month before the final exams, that the group of officers from the directorates of the commander in chief of the ground troops began their work in the training unit.

It was noted with satisfaction that the combat and political training of the students was proceeding with fervor, with high intensity. The lessons were being conducted primarily in the field, with the armament and the combat equipment. The students showed sufficient confidence in firing the organic armament of tanks and infantry fighting vehicles, and in driving the fighting vehicles. Without a doubt the high training level of the officers was responsible for this in many ways. As an example, training platoon, company and battalion commanders achieved excellent and good scores in all gunnery tests using organic equipment.

The future junior commanders received a certain amount of experience in commanding detachments and crews, and in conducting lessons independently with them on different study subjects. The technical proficiency of students in

the unit is at the required level. It is best in the battalion commanded by Major G. Shakaryan and in the tank companies commanded by Major A. Mirnov and Captain V. Demidov. This can be explained by the creative efforts of the officers and their desire to intensify the training process to the fullest. Consider at least what is well known in the unit as "Shakaryan's method"--repeating covered material several times.

In this method the training platoons are divided into two groups. The battalion commander personally or his deputy for technical affairs, Major V. Prokopenko, or the company deputy commanders for technical affairs and the platoon commanders work on a new topic in technical training with the first group. The best-trained NCOs work with the second group. Their objective is limited to reinforcing what was learned previously by asking questions. Then the groups trade places. As a result the students assimilate tank materiel quite successfully. This method of repeating covered materials several times has been adopted by the other training subunits.

There are doubtlessly many other positive examples in the unit demonstrating that commanders and staffs are taking the correct approach to solving the problems of combat and political training. But serious shortcomings were revealed as well.

Had the inspectors assigned grades for lesson quality rather than pursuing the objective of seeking out the best experience and disseminating it, the students would have probably received their lowest score in instructor training. This is a major omission for the future junior commanders, and it is all the more so in regard to the main discipline of combat training--tactics, which are quite rightly referred to as the core, as the heart of field proficiency. Can we expect much in the troops from a junior commander who does not know how to conduct a lesson with personnel interestingly and instructively, organize combat training in the field and effectively control subordinates in such training? Of course not.

How did it happen that most of the students proved themselves to be most weakly trained in the methodology of tactical training, of all things? There are several reasons for this, but the main one is that the officers themselves who teach the students vary in their teaching proficiency. Some of them, for example captains O. Kulakovskiy and S. Kryukov and Senior Lieutenant V. Rybolov--platoon commanders of the 1st Motorized Rifle Training Company, do not have an entirely clear idea of the difference between tactical training and battle drill exercises. And yet, there are significant differences between these forms of personnel training. A particular system is followed and specific procedures are used in each of these types of training. Unique procedures for correcting the shortcomings of subordinates undergoing training and unique criteria for evaluating the actions of students are inherent to each type. And of course, a subject titled "The Detachment in the Offensive," in which the principal study problems are to clarify the position and nature of actions of the enemy and his fire weapons, to issue operation orders and so on, should have been treated not as a form of battle drill exercise but rather as tactical training.

We would not have emphasized this shortcoming, had someone else other than future junior commanders been involved. After all, when such junior commanders return to the troops, they will repeat the same mistakes. It was so that this would not happen that certain measures were implemented by the group of officers working in the subunits.

Lieutenant Colonel A. Kostyuchenko, the senior officer of the Main Directorate of Combat Training of the Ground Troops, needed almost 3 days to help Major A. Kholstinin and Captain A. Tuymatov to prepare a demonstration for officers in tactical training and to carry it out in excellent fashion. Colonel A. Chirkov, a senior officer from the same directorate, devoted no less effort, spirit and diligence to a demonstration of how to conduct gunnery tests with organic equipment.

A demonstration of how a commander, political workers (party committee secretary, unit propagandist and company deputy commander for political affairs), a Komsomol Committee secretary and active party members of a subunit (agitators, Komsomol group organizers and posted newspaper editors) should organize party-political work in the course of fire training was highly beneficial and truly satisfying to the audience. Regiment deputy commander for political affairs Major Yu. Zamarayev conducted a lesson right at the tank moving target gunnery range while the students were conducting fire practice with organic equipment, and Colonel V. Arkhipov, senior inspector of the Political Directorate of the Ground Troops, helped prepare the lesson.

Such lessons should be conducted more often by the command of the training unit. The main thing is to understand that the problem of upgrading the quality of training afforded to junior commanders and specialists cannot be solved unless a change is made in the way people think, and chiefly the training organizers. It must be said however that such change occurs very slowly, and sometimes the progress is completely invisible.

One form of training that has been practiced in the unit for many years in succession requires officers to fulfill individual assignments. These assignments are becoming more practical with every year, and most of them have to do with teaching skills, with drawing up plans for platoon lessons and gunnery exercises, and plans for company and battalion tactical exercises. But it is difficult to decide whether or not these plans are worthy of introduction into the training process, because none of their authors had ever publicly defended them, and none of the senior chiefs ever examined and evaluated them.

And so the work goes on at low rpm, and sometimes even in idle gear. The officers--from platoon commander to regiment commander inclusively--appear to be working all the time, from dawn until dusk, but noticeable changes for the better in comparison with last year are almost nowhere to be seen.

The decisions of the 27th CPSU Congress and the June (1986) CPSU Central Committee Plenum demand that we seriously activate the role of the human factor. After all, concern for the individual, and in our example for the officers and NCOs on the permanent staff, presupposes not only high exactingness toward the individual but also creation of conditions and a

suitable social atmosphere for his ideological and professional growth. How can anything be said about the proficiency of the teachers when the unit (note that it is a training unit) fails to provide not only an instructor training classroom for them, but even instructor training nooks, where exemplary lesson plans and at least the most necessary training literature could be concentrated.

It is also time to change the procedures themselves of monitoring the training process. The unit command checked the organization and course of combat training in all subunits simultaneously in just a single day. An order rewarding one junior officer but punishing 11 senior officers, with six of them hardly deserving the punishment, was published just as hastily. We can understand the command's desire to decisively surmount inertia and stagnation, to quickly rectify the state of affairs. But such a method, where rather than working thoughtfully with the people certain commanders and chiefs limit themselves to drawing up and duplicating various sorts of plans, directives and orders, is being validly condemned by our party today.

There is one solution to the problem: analyzing yesterday's errors calmly and in business-like fashion. Only in this way will we be able to avoid the mistakes of today and yesterday, and encourage the military collectives to work in an atmosphere where each member of the collective feels a high sense of responsibility for assigned work.

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CSO: 1801/79



## CRITIQUE OF SOLUTIONS TO TACTICAL PROBLEM

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 16-17

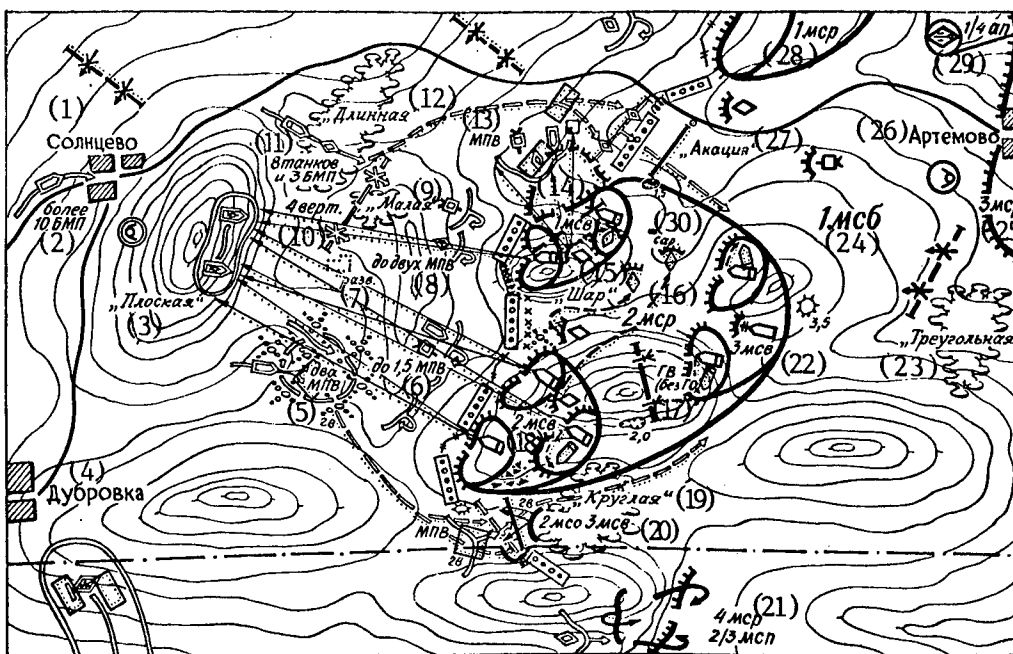
[Unattributed article: "Critique of Solutions to a Tactical Problem"]

[Text] Analysis of the submitted responses led us to the conclusion that most responders were basically correct in estimating the situation. But judging from the proposed solutions, not all had reached valid conclusions from their estimates.

Thus some of the officers concluded that a motorized infantry unit of around battalion strength reinforced by tanks was attacking the 2d Motorized Rifle Company directly. This battalion was supported by a battalion of 155-mm SG [not further identified] (the fire positions are southeast of Dubrovka) and up to two platoons of antitank missile launchers (Jaguar-1). The responders were correct in determining that taking account of losses prior to reaching the front, the enemy company could commit 9-10 tanks, 16-17 infantry fighting vehicles, 5-6 Jaguar-1 self-propelled rocket launchers equipped with Hot antitank guided missiles and 12-13 Milan antitank guided missiles, and over 200 enlisted men and officers. But unfortunately from our point of view the conclusions arrived at from the estimate of the enemy were not altogether accurate.

The officers supposed that the enemy was preparing for a second attack from the front, since he was accumulating forces in Dlinnaya Grove and in nearby shrubbery (see diagram). Therefore they focused their attention in their decision mainly on repelling an attack from this direction. That is where the mistake was made.

In the situation as it has evolved here, the attackers would most likely try to capitalize on the results of the first attack; in particular they would try to penetrate the company strongpoint on the right flank and seize the positions of the 2d Motorized Rifle Detachment of the 1st Motorized Rifle Platoon. It was probably to exploit this breakthrough that the enemy advanced his tanks and infantry fighting vehicles from Dlinnaya Grove. As far as motorized infantry accumulating in the shrubbery is concerned, the enemy had most likely decided to use it on the left flank with the purpose of attaining the rear of the 2d Motorized Rifle Company. The plan was obviously to commit the back-up echelon (the column of infantry fighting vehicles at the western



Key:

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|--|---|
| 1. Solntsevo                             | 16. 2d Motorized Rifle Company                                      |
| 2. More than 10 IFVs                     | 17. Rocket launcher platoon less an advance detachment              |
| 3. Ploskaya                              | 18. 2d Motorized Rifle Company                                      |
| 4. Dubrovka                              | 19. Kruglaya  |
| 5. Two motorized infantry platoons       | 20. 2d Motorized Rifle Detachment, 3d Motorized Rifle Platoon       |
| 6. Up to 1.5 motorized infantry platoons | 21. 4th Motorized Rifle Company, 2d and 3d motorized rifle platoons |
| 7. Scouts                                | 22. 3d Motorized Rifle Platoon                                      |
| 8. Up to 2 motorized infantry platoons   | 23. Treugolnaya   |
| 9. Malaya                                | 24. 1st Motorized Rifle Battalion                                   |
| 10. 4 helicopters                        | 25. 3d Motorized Rifle Company                                      |
| 11. 8 tanks and 3 IFVs                   | 26. Artemovo  |
| 12. Dlinnaya                             | 27. Akatsiya  |
| 13. Motorized infantry platoon           | 28. 1st Motorized Rifle Company                                     |
| 14. 1st Motorized Rifle Platoon          | 29. 1st and 4th artillery platoons                                  |
| 15. Shar                                 | 30. Barn  |

outskirts of Solntsevo) to a breach in our defenses with the purpose of completing the breakthrough of the first position.

The following suggestions were made as well: The enemy might attack from the front with part of his forces and concentrate his main efforts on the right or left flank. In the former case significance was attached to holding the region bounded by the separately standing house, Shar Hill and the barn; in the latter, importance was attached to holding the region bounded by the

shrubbery, the boulders and Pit 2.0. But this would not fully ensure stability of the defenses, since the possibility is not excluded that the enemy might attack from both flanks and the front (as was discussed above).

It is also hard to agree with those responders--there were not many of them by the way--who proposed withdrawing to more advantageous positions on the western edge of Treugolnaya Grove under the cover of smoke with the permission of the battalion commander.

But in this case the officers failed to consider that as soon as the company abandons its well-fortified positions, it would immediately find itself in a more difficult situation. The enemy, whose strength is greatly superior, would not forsake this advantageous moment to defeat and annihilate the 2d Motorized Rifle Company on open terrain. As a result a breach would form at the boundary between two battalions, which would significantly weaken the defenses of not only the 1st Motorized Rifle Battalion but also the regiment as a whole.

In our opinion captains P. Yurkin and M. Prudko made the optimum decisions. In particular they proposed immediately going over to all-around defense and making ready to repel an enemy attack from the front and from the two flanks. They suggested asking the battalion commander to use combat helicopters first to strike the column advancing from Dlinnaya Grove and then the back-up echelon on the western outskirts of Solntsevo, and in addition, to suppress artillery in the vicinity of Dubrovka with fire and neutralize the actions of fire support helicopters.

To eliminate the threatening situation on the right flank the responders decided to bring up the 1st Battery, the 1st Motorized Rifle Platoon, a tank platoon and one infantry fighting vehicle from the 3d Motorized Rifle Platoon. They suggested using the 1st Motorized Rifle Platoon, with fire support from the artillery battery and tank platoon, to decisively attack the enemy, push him out of the positions he had captured, and restore the initial situation. They would move three tanks and two IFVs of the 3d Platoon to alternative positions in order to repel attacks from the direction of Dlinnaya Grove and Burial Mound 3.5. They also decided to hit the enemy with the 1st Artillery Battery at the moment he deploys, and establish defensive fire on a line from the well to Pit 1.5.

The experience of the Great Patriotic War and exercises shows that in order to repel an enemy attack, not less than 50-60 percent of the attacking tanks and IFVs (APCs) must be annihilated; concurrently, not less than half of friendly antitank resources must survive. Let us assume that a tank or antitank guided rocket in an emplacement is capable of successfully fighting two or three tanks or four or five IFVs. In this case the allocated resources can annihilate six to nine tanks and four to five IFVs. There would even be a certain reserve of antitank possibilities in this case.

The officers planned to avert the threat on the left flank by forces of the 3d and 2d motorized rifle platoons, moving one IFV from each of them to alternative positions. A rocket launcher platoon less a detachment would immediately open fire on enemy forces fighting the 2d Motorized Rifle

Detachment, 3d Motorized Rifle Platoon, and then on the accumulation of infantry in the vicinity of the shrubbery with the objective of inflicting losses on it prior to the attack. Defensive fire by the rocket launcher platoon would be foreseen 150 m east of the burial mound. In addition captains Yurkin and Prudko suggest also using the platoon to repel attacks from the front and to support the actions of the 2d Motorized Rifle Detachment, 3d Motorized Rifle Platoon.

The responders assigned the corresponding missions to the subunits on the basis of this plan.

One could agree with this response. But unfortunately neither Captain Yurkin nor Captain Prudko remembered the mortar battery and the Jaguar-1 self-propelled guns in the vicinity of Ploskaya Hill, despite the fact that these are very important targets, since they can fire directly on the company's combat formations.

The conditions of the problem are such that these targets are around 2 km from the fire positions of antitank rocket launchers, and consequently they may be annihilated by antitank guided rockets fired from IFVs. The 2d Motorized Rifle Company would be unable to suppress the mortar battery with its own resources, meaning that it would have to request assistance from the senior chief.

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## TO BE CONSTANTLY SEARCHING

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 18-20

[Article by Col S. Fedotov: "To Be Constantly Searching"]

[Text] No matter what the purpose of a visit to a unit, one question always remains the same: What does this unit have that is instructive, what innovations has it made in its lesson and training procedures? And there is good reason why. Life itself demands that we devote persistent attention to training procedures.

As we know, new things are not born in a vacuum. It is possible to successfully develop training procedures and seek ways to intensify the training process only when everything valuable and progressive accumulated through practical experience is utilized competently. We have many methods and techniques of personnel training in our arsenal which have recommended themselves well and which have been tested by time. They are a concentration of the experience of the best commanders and political workers, and of scientific developments and recommendations obtained as a result of analyzing the process of training and indoctrination in the units and subunits. Studying, generalizing and creatively introducing accumulated experience into practice is the way to raise the quality and effectiveness of combat training.

But at the same time the search for new, original ideas should not be the lot of isolated enthusiasts. This is understood in the unit in which Officer Yu. Korotkov serves. Besides the best specialists in training procedures, the most experienced young officers are also encouraged to help prepare teaching aids and plans for various subjects. Of course they encounter many difficulties, but they try to surmount them together. Proposals are discussed collectively by the unit's training procedures council. And on hearing out the opinions of his senior comrades and receiving the necessary recommendations, the junior officer is able to tackle his work more confidently. With time, he acquires the ability to independently analyze progressive experience and to creatively supplement it with his own training innovations.

A signal company commanded by Captain N. Shcherbatykh demonstrated high combat skills in a recent specialized tactical exercise. He had not been with the unit long, but he had already served in the limited contingent of Soviet

troops in Afghanistan. The officer earned the Order of the Red Star for proficiency and bravery in fulfilling his international duty. A commander with combat experience, he has this to say:

"It is impossible to serve today without seeking new training procedures. Take as an example the problem of providing communication support to a subunit in the mountains. New procedures by which to train specialists to organize communications at high altitude as quickly as possible and to maintain uninterrupted communications are especially necessary."

But let us return to the exercise. In it, in addition to the experienced specialists, soldiers who had just recently joined the company proved themselves well. They acted competently and confidently in a complex, rapidly changing situation. The crews of warrant officers S. Krivtsov and V. Kupryushin distinguished themselves well, as did privates 1st class A. Chulochnikov and V. Kutsevich. The coordinated efforts of specialists of different profiles were noted in the critique. Many were amazed: How was Captain Shcherbatykh able to raise his subordinates to such a high level of proficiency in such a short time?

The company commander was successful chiefly because he made competent use of recommendations on the best procedures for training specialists in a short time. Take as an example a training manual on preparing, turning on and tuning a radio set. It was written by officers B. Khoziyev and S. Yeliseyev. Now the student no longer needs to hunt through the instructions and lose precious minutes of training time: The training aid makes it easier for him. After all, it is much more convenient and interesting to follow a training card on which all of the operations are indicated. And because this is so, the material is assimilated faster and retained better.

Company specialists are also credited with many creative discoveries. Efficiency experts set up an automatic Morse keyboard transmitter in a classroom housing an Ucheba [training] complex. A platoon commander can divide his platoon into three groups of radio telegraphists in accordance with their training level. The first group receives signals from the automatic keyboard at a preset rate, while the second does so from a tape recorder at a higher rate. The lesson leader works with the third group at a rate the students can handle. Such a differentiated approach significantly raises the effectiveness of the lessons, and specialists become competent much faster.

I would like to dwell on this point with a little greater detail in my discussion of ways to find progressive training methods.

Once I sat in on lessons being conducted in a subunit of another unit. The officer explained the meaning of complex physical processes occurring in the apparatus clearly and comprehensibly. The diagrams and posters he had gathered together beforehand helped him out. One could sense that the soldiers and NCOs were assimilating the planned subject matter reasonably well. Nonetheless, the lesson leader left the classroom dissatisfied.

Yes, he reasoned, the specialists did acquire a certain amount of theoretical knowledge. But will they retain this knowledge, will it be deep enough, will

the students be able to make practical use of it in a situation where the equipment does something unexpected? What in the officer's opinion was lacking from the lesson? The answer is obvious: hands-on experience.

It would have been good if the apparatus the students were studying were available in addition to the diagrams and posters. Does this mean, then, that the technical training must be carried out in the field? Do the radio sets have to be pulled out and deployed each time? This would take the personnel away from other things for a long time, and moreover, just the class's travel time to and from the training site is long. How could they make up for lost time? They thought about it and came up with this idea: Why not bring the apparatus closer to the students, why not set things up so that the apparatus would always be readily available to the lesson leaders?

And now, every classroom has "live" equipment. Now a specialist can gain the habits of working with the materiel simultaneously with theoretical knowledge from diagrams and posters. The unit in which Officer Korotkov serves has now been using this procedure for a long time. A decisive struggle is being waged here against losses of training time and against simplifications and laxity in combat training. Specialists undergo training in conditions as close to those of real combat as possible. The soldiers act resourcefully, and they have become more persistent in their training.

Let us return to Captain Shcherbatykh. All radio station crewmembers practice their responsibilities in training sessions until they become automatic. The specialists carry out each operation of preparing the equipment for combat operation until such time that the crews achieve faultless coordination. Night lessons contribute a great deal to growth of proficiency. In them the soldiers develop the ability to perform their responsibilities efficiently in a complex situation, and they improve their psychological preparedness.

Now that the discussion has turned to training sessions, I would like to talk about the procedures used in training exercises conducted by Captain Shcherbatykh's company. Judging from the results, they are making a good impact. It must be said that at first, these procedures did not fit in with the commonly accepted combat training system. What is the essence of these procedures?

Before, a platoon commander trained only with his own subordinates, each with his own specialty. This naturally made individual control of progress difficult. Moreover the students could not carry a full training load.

Now prior to the training day each officer is assigned to work with a certain group. As an example one might be asked to conduct exercises with the purpose of increasing the rate of Morse reception, and of key and keyboard transmission. A second might be ordered to lead a group polishing its knowledge of the rules of radio traffic. Radio station crews that are not participating in training exercises might use training equipment to practice tuning the apparatus under the guidance of a third officer.

In the next training hour the groups trade places. What does such a procedure have to offer?

First of all the lesson leader works with a smaller number of students. The officer can maintain direct contact with each person, he is aware of the weak points of a soldier's training, and he can work with him more objectively to correct any deficiencies. Second, the officers now have the possibility for preparing better for the lessons, inasmuch as they can deal with a narrower range of study problems. And finally, the breaks during which the groups trade places have a positive effect on the performance of the enlisted men and NCOs, who endure a heavier load during the training time itself.

It must be said that many had doubts at first, that such a personnel training procedure might not really be so effective. They were concerned that the officers would have to work not only with their own but also other subordinates. But the apprehensions were unfounded. The officers gained a sense of responsibility for the training of all of the signalmen, understanding that providing dependable radio communication to subunits depends on the coordination and high training level of all crews, of all specialists in them. To go a step farther, the new procedures successfully withstood the test of time. The airborne signalmen were able to prepare well for major examinations in tactical and specialized tactical exercises. The soldiers developed self-confidence, without which fulfillment of complex combat training tasks would be unimaginable.

There are many examples of this sort. But the main thing I would like to emphasize is that those in the unit entrusted with the job of teaching subordinates are oriented on seeking effective methods of training competent specialists. The unit uses various methods--study of its own progressive experience and the accomplishments of other units, familiarization with specialized literature, and technical conferences.

The training materials and equipment are being improved constantly here. What the unit has available to it is enough to ensure that the personnel achieve a high level of technical and specialized training. But the efforts to improve the classrooms and to outfit them with improved equipment never cease. This is where the efficiency experts come in. There are things to which they can apply their abilities, and in relation to which they can utilize their inquisitive, creative thought.

Investigative activities are now becoming increasingly more important to the commander. The conditions for such activities do exist in our troops. In tactical and specialized tactical exercises, in training sessions and during repairs, the officer comes in contact with all kinds of new and progressive ideas born of military theory and practice. A commander who thoughtfully seeks ways to successfully fulfill combat training missions and to achieve fuller use of the combat potentials of modern equipment is able to gather an abundance of hard information. Conclusions and proposals brought into being in the course of his analysis are realized, and advanced procedures pertaining to the most complex problems of specialist training are developed.

Responsibility and independence: They are mandatory of commanders wishing to solve the complex problems of personnel training. An officer wishing to solve such problems must make a daily effort to develop and introduce progressive



procedures. And the more persistence, diligence and creativity he displays, the more frequently he will enjoy success in his career as a commander.

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## USING TRAINING TIME FOR TRAINING

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 21-22

[Article by Guards Maj A. Bychkov: "Using Training Time for Training"]

[Text] I recently attended a tactical exercise involving an airborne assault and field firing. The subunits carried out complex, diverse missions. The tactical situation was distinguished by fluidity, and it was saturated with inputs that demanded deep and comprehensive knowledge and psychological and physical endurance of the personnel. The results achieved by the subunits varied. One thing that was typical was that those subunits which had been noted previously, before the exercise, for good organization of the training process and for an efficient rhythm of combat and political training did the best.

The parachute landing battalion under the command of Guards Major A. Lentsov fulfilled its mission successfully in a situation which I would have to admit was exceptionally complex. Understandably, however, it was not the proficiency of the battalion commander alone that ensured victory in the training battle. The skills and coordination of the companies, platoons and detachments had an effect as well. The paratroopers demonstrated all of the things they learned in their day-to-day routine. And the latter proceeds rhythmically, it is well organized. There has never been a case yet in the battalion where planned lessons had to be cancelled and put off to another time. Good training procedures are used in the lessons, and they are conducted with the requirements of the guidelines. The officers are constantly engaged in a creative search: They are always developing procedures by which to improve the quality of combat training and make it even more effective.

Combat and political training is also organized efficiently and thoughtfully in other subunits of our Guards Airborne Chernigov Division. Quite naturally, therefore, they receive high scores in tactical exercises.

Often when I observe tactical exercises, field firings and airborne exercises, and especially when they are conducted in a complex situation, I develop a feeling of pride for our remarkable equipment and weapons. This armament is capable of missions soldiers could not even imagine not that long ago. But if

the combat potentials of weapons are to be utilized fully, they must be known to perfection, and they must be handled proficiently. That is a hard thing to do. It requires great mental and physical effort, the appropriate conditions and, most importantly, highly organized combat training. Every hour and every minute of training must help to increase combat readiness and fighting efficiency.

Our officers try to organize the training process in such a way as to achieve the greatest return. Indicative in this respect is the airborne battalion commanded by Major V. Shamanov.

Highly intense combat training is achieved here chiefly through well conceived planning. The training process is under the unweakening control of the staff, political workers and the party organization.

There is also much that is instructive in the organization of combat training in other subunits. But we still encounter some disorganized commanders who cause training time to be utilized for other than its intended purpose. If you ask such a commander why this is, he answers with something incomprehensible. We were forced to dispense with training for some unpostponable housekeeping, or for some other ongoing project, he might say. And he would immediately assure you that they would make up for lost training, that they would catch up.

This is about the way they thought in the recent past in the airborne subunit commanded by Guards Captain O. Yevsyukov. And although neither the commander nor other officers said so openly, they acted in full correspondence with such notions, which was confirmed incidentally by the poor organization of the training process and by cases of distraction of personnel from their lessons. I asked them why training was organized so poorly. They offered "rush" and "urgent" projects as excuses in reply. But the actual reason was that the commander and the other officers were not planning their work thoughtfully. Consequently numerous ongoing problems accumulated in their work, which then had to be solved at the expense of training. But what about responsibility for what is most important in service--combat training of paratroopers? The command was compelled to strictly punish Guards Captain O. Yevsyukov, Guards Senior Lieutenant A. Stukov and others.

But the question that arises is this: Is the commander the only one at fault? Representatives from unit headquarters had visited the subunit. And each time they reported that everything was normal with training in the subunit. But then the subunit did not do so well in an exercise. How did these officers feel now? They were not unusually upset: They were only sorry that the commander had supposedly let them down, that he had not lived up to their expectations. And they saw no blame in themselves.

Without a doubt the one-man commander is fully responsible for the state of affairs in the work area entrusted to him. And when I brought up the unit staff officers, it was not at all my intention to suggest that they should assume the responsibilities of the subunit commander. However, they should be punished strictly for failing to notice the shortcomings in personnel training in the subunit subordinated to them.

To monitor training means first of all to analyze the training process and to develop effective measures to improve it, which unfortunately is not always done. Life persistently demands constant improvement of the training process, its intensification, and sensible use of time and materiel.

Personnel should study not to get high scores in a tactical exercise or a test, but rather to achieve a state of readiness in which they could fulfill their missions at any moment.

In the best subunits, the fight to intensify the training process is being waged in all things great and small--in everything from day-to-day lessons to tactical exercises involving an assault landing and field firing. Such subunits do not conduct lessons and training in which company, platoon, detachment and crew personnel go over and over the same problems monotonously and mechanically. They are waging a decisive struggle against simplifications and laxity. And the results are obvious. Take at least Major Shamanov's airborne battalion. Within a relatively short time it transformed from one of the failing units to one of the leaders. Such forward progress was made possible because the battalion learned to value every minute of training, to sensibly utilize training time.

But this is not always so. One company acted incompetently in a tactical exercise. This caused some amazement: According to entries in the company's combat training log it had gone over all of the planned tactical training subjects, and almost 100 percent of the personnel had participated in the training. What was the explanation for the omissions in the subunit's training? The entries in the log were analyzed, and an unpleasant picture was revealed.

As an example one entry in the log indicated that a certain platoon was undergoing training in the field, but it was actually serving guard duty. In another case a company that was fully absorbed in a tactical exercise was ordered by a senior chief to stop what it was doing and do something else that had no relationship to combat training. But the log states that the subject had been gone over completely.

Army service does not exclude some adjustments to the plan dictated by circumstances. This is why it is especially important to keep objective records on what training has been carried out, and to carefully note those who miss any training. Only in this way can we arrive at a real picture of the training level of the soldiers.

We often say that every minute of training time is precious, which is true. And we must relate to each minute with corresponding responsibility. How can we talk about effective use of time when paratroopers show up at the firing range to learn that the trainers are down?

It is a well known truth that a good lesson not only teaches but also indoctrinates. The role played by training in indoctrination is acquiring

even greater significance today. Formalism and a lack of conscientiousness in organizing training cool the enthusiasm of the people and lead to violations of military discipline.

I think that the reader would agree with me when I say that it is difficult to imagine waging a struggle to upgrade the quality and effectiveness of combat training and to make sensible use of training time in the absence of socialist competition. But the latter affects the deeds and hearts of people only when its organizers approach their work resourcefully and creatively, when they are capable of transforming the soldier's hard work into inspiring labor which brings joy and deep satisfaction.

Creativity in organizing and managing competition: How does it manifest itself, and what are its criteria? There are apparently no definite answers to these questions. What, for example, allowed Guards Major Shamanov to mobilize his subordinates to fulfill their combat training missions well, and to achieve success? Was it high competence, qualified mastery of equipment and weapons, an outstanding knowledge of its combat use? Doubtlessly so. The ability to efficiently organize training and indoctrination, to treasure each minute of training time? This is typical of Major Shamanov's work style as well. Also important is the fact that he, the staff, the political workers and the active party and Komsomol members constantly maintain a spirit of exactingness, an atmosphere of creative inquiry and initiative in the collective.

Avoidance of stereotypy, of routine in competition arouses the interest of paratroopers and encourages their desire to excel, to do better than their rivals. And this is always taken into account in the battalion. Knowing that performance of the same operations over a long period of time dulls interest and reduces activity, lesson leaders try to place their students in unusual conditions, and to create situations requiring resourceful actions. And the better they can do this, the more intense is the rivalry and the more effectively is the training time utilized.

Everything valuable and instructive that arises in the course of training and socialist competition belongs to us all. Its competent use helps commanders, political workers and party and Komsomol organizations to direct the efforts of the personnel toward making sensible use of training time and toward fulfilling their socialist pledges well in the competition presently being conducted with the slogan "We will fulfill the decisions of the 27th CPSU Congress, and we will dependably protect the accomplishments of socialism!"

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## CLASS RATING--INDICATOR OF PROFICIENCY

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 23-24

[Article by Col Ye. Sharipo, senior officer, Main Directorate for Combat Training of the Ground Troops: "Class Rating--Indicator of Proficiency"]

[Text] Modern combat demands high proficiency and the ability to make maximum use of the combat potentials of armament and equipment from each serviceman. This is why commanders of all ranks and party and Komsomol organizations must display persistent attention toward the process of upgrading personnel qualifications.

The work of training rated specialists must be carried out throughout the entire training year, and qualifications must be awarded (from 3d Class to Master) in accordance with requirements of the USSR minister of defense and the commander in chief of the ground troops. In this case servicemen serving their first term must wait at least 5 months before advancing to the next step in their qualifications, while extended-service servicemen and warrant officers must wait a year after their previous rating was awarded. The master title is awarded only to warrant officers and extended-service servicemen.

But servicemen can achieve high ratings only if they earn excellent and good scores in their principal training subjects, and if they can operate the armament and equipment competently, without mishaps and breakdowns, and maintain it in serviceable condition. In addition they must pass their combat vehicle driving tests with a score of not less than "good," they must fulfill technical training standards in accordance at their qualification level with scores of good and excellent, and they must have accumulated the necessary time of practical control of a fighting vehicle.

Planning is an important factor in the training of rated specialists. A monthly driving schedule is drawn up with regard for the missions at hand, for the allocated engine running time, for practical experience, for training level and for the individual qualities of each soldier. This schedule is coordinated with the time needed to study the corresponding training subjects and with the deadlines for taking tests for higher qualifications. It should be remembered in this case that driver-mechanics of the same subunit may be characterized by different training levels. Consequently these differences must be eliminated as quickly as possible.

But this should not be the end of the effort. A number of additional measures must be foreseen--for example technical conferences, discussions, lectures, training films and so on. Study circles specializing in different forms of training play a large role. Specialists with high ratings are appointed the leaders. It would be suitable for such study circles to meet not less than once a week during time allocated to mass political work. The training progress of rated specialists should be discussed periodically at party and Komsomol meetings and officer conferences, and the experience of the best subunits should be generalized and disseminated promptly.

Party-political work is acquiring special significance in upgrading the qualifications of the personnel. It must be conducted purposefully. Thus specific examples from the experience of the Great Patriotic War and peacetime training should be used to demonstrate that specialists with high ratings perform their missions more successfully, and that in a combat situation they have been able to achieve victory over a superior enemy with lower losses. Every serviceman is obligated to understand that raising his qualifications is his duty, his personal contribution to raising the combat readiness of the subunit and unit. The significance of properly organized socialist competition is considerable as well. Temporary commissions consisting of a chairman, his deputies and members are appointed each year by the order of commanders (chiefs) having the right to do so with the purpose of determining the preparedness of servicemen nominated for raising (confirming) their class rating. All members of the commission must have a rating equal to or higher than that of their examinees.

The commission does its work on coordination with the military unit commander in the following sequence. Before the testing begins, the commission uses materials and records supplied by the subunit to verify the academic success of servicemen in combat and political training, the length of practical experience in their specialty, their military discipline, and the quality with which they fulfill other requirements, to include the results of 5- and 7-day driver-mechanic rallies conducted with the purpose of upgrading (confirming) ratings. Then the commission renders its decision concerning admission to testing. The tests begin with examination tickets, each of which contains five questions. It is sufficient for a serviceman to answer them correctly in accordance with requirements imposed on a specialist of the given qualifications. Then his performance of his functional responsibilities and his ability to prepare armament and equipment for combat use and to maintain it well are tested.

The servicemen perform their exercises and satisfy their standards at the training center, at the tank driving range, at the moving-target tank gunnery range and in the fighting vehicle pool. They participate in test exercises in the final stage. Those who fail any part of the tests are prohibited from participating in any further tests.

Commissioners evaluating knowledge and habits must consider how well the servicemen comply with safety practices in the use, maintenance, repair and storage of armament and equipment, and with fire safety rules. The test results are reflected in a document signed by the members of the commission

and approved by the appointing commander (chief). Then an order is issued on the basis of the approved document.

I would like to say this in conclusion: When sufficient attention is devoted to this issue, as a rule specialists successfully increase their ratings. The subunits led by Captain A. Syurkin and Senior Lieutenant N. Ponomarev (Moscow Military District) are an example. Ninety percent of the driver-mechanics in the former and 80 percent in the latter are specialists 1st and 2d class. The driver-mechanics of these companies are excellent drivers in all kinds of conditions, in any weather and no matter what the visibility. They have developed endurance, will, decisiveness and boldness, and they know how to act independently and resourcefully. And privates 1st class Yu. Bolshakov and A. Karetin and Private A. Shishin are not only outstanding specialists but also active assistants to technical circle leaders--Senior Lieutenant S. Odintsov and Lieutenant A. Gelever.

The work of these company commanders deserves full approval, and their experience in training top-rated specialists deserves study and dissemination.

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## TEST IN DRILL TRAINING

Moscow VOYENNIY VESTNIK in Russian No 10, Oct 86 pp 24-26

[Article by Col V. Apakidze: "A Test in Drill Training"]

[Text] Drill training is one of the principal objects of study, and in many ways it promotes good execution of all missions facing the troops, including those of tightening military discipline and maintaining order.

The drill skills of students are tested in training units and subunits during inspection parades, in test exercises, in the course of training and in final examinations.

Test exercises are conducted by senior chiefs (battalion commander and above), after studying each subject as a rule. They are planned ahead of time, and they are entered into the company schedule. Attention is devoted mainly to testing the individual training of the students. All students--future NCOs--must additionally know how to give commands correctly and clearly, how to organize and conduct exercises, and how to reveal and promptly correct the mistakes of their students. All of these items are evaluated during the test exercise as well.

Battalion commander Major Yu. Kovalev conducted a test exercise for a training platoon with the purpose of determining the quality of the individual drill skills of the students and the coordination of the platoon, and to improve the command and instructor skills of the students. His procedure is described below.

Preparing for the exercise, the officer reacquainted himself with the requirements of the guidelines, wrote his plan, and had it approved by his senior chief.

At the appointed time platoon commander Senior Lieutenant P. Karpov led his subunit to the drill pad and formed the personnel in two ranks. When company commander Captain Yu. Chulkin arrived, the lieutenant reported to him that the platoon was ready for its test exercise. Then, after inspecting the students, he gave the command to greet Major Kovalev as he approached the formation, and he reported to him. The rest of the exercise was conducted in accordance with the approved plan, an excerpt from which is presented below.

On Major Kovalev's instructions all students acting as detachment commanders received individual cards. The commands the students were to give for drill movements were written on these cards. The order of the movements was different on each card. This made it possible to test the platoon not just on the 8-10 basic drill movements but also on all that had been learned by the test date from chapters 2, 3 and 4 of the Drill Regulations.

It should be noted in conclusion that the battalion commander used the proper procedures to conduct the test exercise, that the personnel exhibited good individual drill skills, and that the platoon was well coordinated. Of course some of the students acting as detachment commanders did not give their commands with sufficient clarity and correctness. Further training would take care of these problems.

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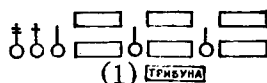
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### Exercise Plan (Excerpt)

Exercise Leader's Actions	Diagram	Actions of Test Subjects
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#### 1. Forming Up the Platoon for the Test (Before It Begins)

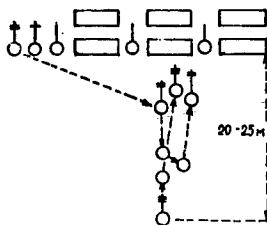
Key: (1) Reviewing stand



The platoon is led to the drill pad by the platoon commander and formed into two ranks

#### 2. Greeting and Saluting the Battalion Commander--3 Min

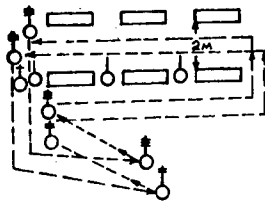
Appears at the site of the exercise at the appointed time, and after the company commander gives orders for the salute, the leader renders a hand salute. On receiving the report he walks to the middle of the formation, greets the personnel, instructs the commander to put the formation at "Parade Rest," drops his hand, announces the order of the test exercise and gives the necessary instructions on its continuation



When the battalion commander gets within 20-25 paces, the company commander gives the command to greet the battalion commander, renders a hand salute, marches to the commander at attention, stops two or three paces before him and reports. Then the company commander takes a step to the side with his right (left) leg while simultaneously turning left (right); letting the chief go first, he follows him one or two paces behind him and to the outside of the formation. On receiving permission, he gives the command "Parade Rest" and drops his salute

### 3. Inspection of the Servicemen--17 Min

Special attention is turned to the following during the inspection: the fit of the uniform and footwear, their serviceability and neatness; proper attachment of shoulder boards, patches and sleeve insignias; proper wearing of uniform accessories; condition of gear and weapons; the neatness of the haircuts of the NCOs and students.



The inspector is accompanied by the platoon and company commanders during the inspection. The platoon commander gives commands at his instructions.

When addressed, each serviceman clearly states his position, rank and name, and replies sharply when questioned

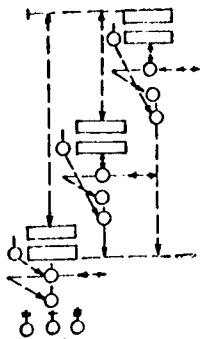
Then he tests the servicemen's knowledge of the Drill Regulations

### 4. Testing Individual Training--60 Min

Instructs the company commander to summon the platoon commander out of the formation for performance of drill movements.

Evaluates the actions of the platoon commander, instructs him to present the 1st Squad for testing, and instructs the rest to carry out the same movements under the guidance of their commanders.

After the 1st Squad is tested, he evaluates performance of drill movements by each serviceman with and without his weapon in the rest of the squads in the same order



The company commander instructs the platoon commander to execute turns in place and while marching, the salute, marching to attention, approaching a chief and withdrawing from him.

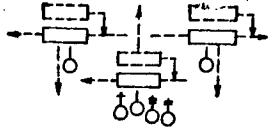
Then the platoon commander breaks the subunit down into squads and orders the commanders of the 2d and 3d squads to begin training.

The commander of the 1st Squad performs movements in response to commands of the platoon commander, and then he gives the same commands to the next student. Next, the tested student gives commands to the following student, and so on until all personnel of the squad are evaluated.

After this, the 2d Squad is presented for testing, and then the 3d Squad

## 5. Testing for Drill Coordination--25 Min

Gives orders to present the squad for inspection of drill coordination in line and in column formation. Students play the role of commander.

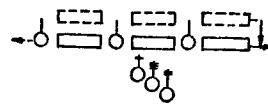


The platoon commander presents the squads for inspection one at a time.

Appointed students act as squad commanders and control their formations

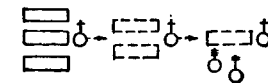
Evaluates coordination of the squads and the teaching skills of the students

Inspects and evaluates the actions of the platoon in line formation



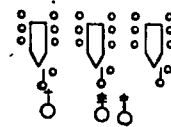
The platoon commander presents the platoon in two ranks. The ranks of the platoon are reformed, opened and closed

Evaluates reforming of the platoon into column formation



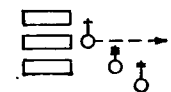
The platoon is reformed into column formation

Checks the actions of personnel by their vehicles and on the vehicles as they get on and off



The platoon commander forms the subunit in front of the vehicles, inspects weapons, allots the personnel among the vehicles and gives commands (signals) to form up, to board and to dismount

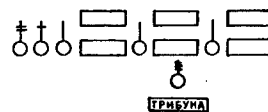
Evaluates the platoon's ability to sing a marching song and to render the salute while moving in formation



The platoon marches by while singing and salutes in response to commands from its commander

## 6. Critique of the Test Exercise--5 Min

Summarizes the exercise results: Announces individual scores and scores for drill coordination, singles out the best performers and indicates the shortcomings. Summarizes the results of fulfilling socialist pledges



The platoon commander forms the platoon into two ranks for the critique, reports to the battalion commander and returns to formation on his orders

## REPENTANCE

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 27-29

[Article by Maj S. Kravchenko: "Repentance"]

[Text] The effectiveness of efforts to strengthen military order, to indoctrinate enlisted men and NCOs and to unify subordinated collectives is determined in many ways by the personal qualities of the commander, by his authority, and by the example he sets for faultless fulfillment of official duties. This is why it is very important for an officer to be convinced to the core that nothing is inconsequential in matters of discipline.

Troop experience shows that a young commander usually feels that he must comply strictly with the requirements of the regulations and manuals. But owing to lack of experience he may sometimes display weakness of will and immaturity in his acts, assuming that insignificant violations of existing rules and norms of behavior are not often enough to warrant the accusation that he is lacking in discipline.

This opinion is fundamentally wrong. Its inevitable result is that these acts become increasingly more serious from one day to the next. This process goes on quickly and unnoticeably. And of course, in such cases intervention on the part of senior comrades and commanders becomes necessary. Today's requirements oblige us to relate to each other with concern and attention, to help eliminate shortcomings in time, and not to hide our eyes from them.

Sometimes when describing a certain officer some commanders say: "He has discipline, but...." There can be no "buts" in this area. A disciplined individual would not deviate from the requirements of our morality and the military regulations. And once he does deviate, something else has to be said about his discipline.

Fighting for discipline, it is important not to go to the other extreme--to try to direct the individual onto the righteous path by punishment alone. There is not much benefit from this either. Let me cite some examples that I have gathered on trips to different units. Let me qualify right away that the people that will be discussed below have served or are now serving in different districts and units.

And so, let us consider three officers. Captain A. Pashchuk graduated from military school in 1966, Captain V. Galkin graduated in 1974, and Lieutenant A. Sharkov graduated in 1983. There are 25 reprimands entered in Captain Pashchuk's record of service card, 22 in Captain Galkin's and 10 in Lieutenant Sharkov's. The officers differ in character, in military specialty, and all the more so in time of service. But Lieutenant Sharkov's initial record of service raises particular apprehensions. It recalls the path traveled by captains Pashchuk and Galkin. In order not to be accused of making unsubstantiated statements, let me describe the way the careers of these officers unfolded, and where they led.

Here is a passage from Pashchuk's first performance report: "Proved himself to be a disciplined, diligent student during his time at the school. Good mastery of teaching skills. Capable of competently organizing indoctrination in the subunit." You would have to agree that hearing such things about yourself is pleasant. And to dispel any doubts as to the accuracy of this report, let me add that Pashchuk graduated from the school with an almost perfect academic record. And during his training he earned 22 merits.

Subsequent performance reports were no less laudable. For example, in 1972: "...possesses good organizing capabilities, performs official duties conscientiously." In 1982: "Competent, disciplined officer. Works hard to raise his ideological and theoretical level. Conducts interesting lessons with the personnel, and uses correct procedures...."

Everything seems as if it is as it should be. But this is only at first glance.

All of the performance reports (except the first, which was written at the school) contain passages beginning with the word "however." One would think that this should have caught the attention of both those who wrote the reports and those who read them. In 1972: "...however, abuses alcoholic beverages"; 1978: "...however, cases of abuse of alcoholic beverages have occurred"; 1982: "...however, there was one instance of abuse of alcoholic beverages while performing official duties." And more. Each of these performance reports ends with the conclusion: "...requires control on the part of senior chiefs."

But was such control exercised? Did the fact that the officer, who had just started out in his career, acquired an affinity for the bottle produce a sense of alarm in commanders? In my opinion, no. Otherwise he would not have experienced this gradual decline.

We cannot of course lay all blame for the fate of Captain Pashchuk (he was dismissed from the armed forces) upon his last commanders. He had served in several units, and while the people who signed his performance reports were different, they were too much the same in their indifference to the individual's fate. So he drinks? Well, all right, we'll just write that in his performance report. And for some reason it did not dawn on anyone that the quagmire was pulling down an officer that was really not all that bad, one who knew how to work with people.

Of course, Pashchuk himself is to blame for everything that happened. He was unable to conquer his weakness. But we would also have to point the finger at those who worked with him for so many years--his commanders, friends and simply his fellow workers. They did, after all, see what he was like at work and at home. It may even be that some of them may have shared the same table with him. But none of them had any compassion for the man. Nor obviously did the commanders; when a little more than 2 years after a generally positive performance report, a different kind was written in 1985.

Judge for yourself. "Made an unfavorable impression in the course of his career. Extremely undisciplined, asks little of himself and subordinates. Does not fulfill his responsibilities. Does not involve himself in personnel training and indoctrination. Careless in preparing and conducting lessons. Lacks initiative. Takes no part in social life."

Let us recall the first performance reports. No one can say that they were written for the same person. But it can be said confidently that they were written by undemanding people, by people who approached this very important tasks uncritically. What are the facts? Here they are.

It was written in the 1972 performance report that Pashchuk showed himself to be a disciplined, demanding officer. How is it, then, that he picked up so many reprimands in that same year, for lack of personal discipline, for being absent without leave and so on? The situation was the same 10 years later. While the descriptions are positive, he accumulates over a dozen reprimands each year. And in 1984, just in July alone, he received two strict reprimands from the battalion chief of staff, and a reprimand and strict reprimand from the battalion commander. This begs the question: Was the officer not being prepared for the fall?

Captain Galkin's fate was no less pleasant. Twenty-two reprimands in 3 years. Eleven of them in 1984. His record of service card contains the entire list of punishments which can be imposed on officers and which are foreseen by the USSR Armed Forces Disciplinary Regulations.

And in the meantime the performance reports in his personal file are totally unintelligible. When up for promotion, the things said about him were positive, though of course they were written in standard phraseology: "Conducts lessons regularly," "A diligent, conscientious officer," "Displays exactingness," "Possesses good organizational qualities" and so on. And when he is demoted in rank or position, the corresponding expressions appear: "Makes an unfavorable impression," "Negligent in the performance of his official duties," "Undisciplined" and so on.

There is good reason why I have described the fates of these two people in such great detail. Complete indifference to the individual is obvious. Where is the concern for those who work with you, for those whose fate you are responsible for in some measure owing to your official position? There is good reason our regulations demand that a commander indoctrinate his subordinates in the spirit of unswerving fulfillment of all requirements of military discipline, and develop and maintain their awareness of their

military honor and military duty. Commanders must turn special attention to studying the personal qualities of servicemen, and to promptly revealing the causes of misdeeds by their subordinates and preventing them. But the commanders under whose supervision both Pashchuk and Galkin served could remember nothing more than the fact that the same regulations compelled them to punish wayward soldiers strictly. In general, rather than controlling the situation, they were controlled by it.

I would think that it is clear to everyone that the discipline of officers depends chiefly on themselves. No one can doubt that. But the level of discipline is also determined to a considerable degree by the attentiveness and concern displayed toward subordinates by commanders and toward younger soldiers by older comrades.

But unfortunately we find the reverse in some cases. What other explanation could there be for the fact that two different record of service cards appeared in Captain Galkin's personal file? One listed several awards, and "No reprimands" was written on the back, while the other contained a whole list of reprimands.

Recall that we began the article by mentioning Lieutenant Sharkov, whose time of service is limited to just 3 years. Nonetheless it is noted in records of discussions held with him by company commander Senior Lieutenant V. Privezentsev and battalion commander Captain V. Kharmalov that Lieutenant Sharkov had made an unfavorable impression, and that he tended to absent himself from his official duties. The conclusion was reached that while he was qualified for the position he occupied, his behavior required continuous control.

So exercise this control, help the officer, assist him in acquiring discipline! But alas, when I talked with the lieutenant he could not recall ever talking with senior commanders or political workers as one friend to another or even as a father to a son. And for some reason no one picked up on the fact that while in the first half year after graduating from school Lieutenant Sharkov handled his responsibilities reasonably well and his platoon had a good record, things began to go slowly downhill after that, so that just a little more than a year later his performance reports offered the following descriptions: "Makes an unfavorable impression. Negligent in the performance of official duties. Participates little in the training and indoctrination of the personnel of his platoon. Makes no effort to raise his professional level. Personally undisciplined. Systematically abuses alcoholic beverages." This is from his confidential report. "Makes an unfavorable impression. Unprincipled, negligent communist." This is from his party report.

And that's that. The conclusions are drawn. The man could be written off, as sailors say. But why? What were the causes of his decline? None of the commanders asked themselves that. Even though the answer is not all that hard to find. They simply should have paid more attention to the lieutenant; they should have shown an interest in his interests and positive characteristics, and developed them.



Lieutenant Sharkov was an active sportsman in school. Even after he became an officer he showed an interest in sports. But where was he to apply his strengths? Extremely little attention is devoted to sports in the garrison. Competitions are conducted on the basis of a reduced program, or as we often say, off-handedly. The officer tried to organize a children's team, so that he could train it and prepare the boys for a try at the "Leather Ball" prize. But he never received any support. The regiment deputy commander for political affairs brushed him off: "Don't you have enough to do? Are you looking for more work?" It did not come to the political worker's mind that besides his principal official duties, a person may have personal interests and aspirations.

Nor does the garrison officers' club, which is responsible for organizing the leisure time of the servicemen, work especially actively. And the personal needs of junior officers are not fully met either.

And so it happened that the vacuum created because things were not done by those who are required to do them was filled by something else. After all, an undisciplined person is not born--he becomes one. And not all at once.

I do not believe it is right to justify the misdeeds of a certain officer by saying that he was just young, that he made mistakes. Sometimes it is hard to accept that: After all, the officer's life and career could have evolved in a different way. Young men who don officer's shoulder boards have energy, daring plans and bold dreams. And it is bad when the wings of these dreams are clipped.

Unfortunately Lieutenant Sharkov was unable to avoid the temptations, he was unable to find the strength to say no the first time that his next-door-neighbors in the residence hall invited him to drink dinner with them. After that, things went from bad to worse. He thought less about his work than about how and where he could "fortify" himself. And no one was alarmed that the lieutenant was beginning to slide downhill.

The first time he was punished was in November 1984, when the battalion chief of staff gave him a strict reprimand "for consuming alcoholic beverages and for tactless behavior." By punishing the soldier the battalion chief of staff felt that his mission was complete. There was no preventive work of any sort. And yet, it was noted in the lieutenant's party report while he was at school that he is "self-critical, he reacts properly to criticism from friends, and he tries to correct noted shortcomings."

More reprimands followed. How many? I mentioned the number at the beginning of the story. Unfortunately, some of them even the lieutenant himself was unaware of. The impression is created that these reprimands were issued and written not so much for educational purposes as for the sake of quantity.

We have begun a whole people's fight against the evil of drunkenness and alcoholism. The party and government demand that we not only punish abusers of alcohol more strictly but also activate educational work, rather than lashing out wantonly, as commanders did with Lieutenant Sharkov. If he drinks, toss him out of the army. But they did not think about how much it

costs the state to train him. Could the lieutenant be reeducated, could he be helped to find himself, to assume the righteous path? Luckily the higher authorities carefully analyzed the officer's situation and decided not to dismiss him from the armed forces. I think they made the right choice. In my interview with him, Lieutenant Sharkov said: "Everything that happened before is now just a bad memory."

Such repentance is already an indication that the officer will find the strength to change his destiny. And real friends and commanders--wise, reasonable and strict, but also sensitive and just--will play a major role in this.

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## PERSONALLY RESPONSIBLE

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 30-32

[Article by Capt S. Kornev, commander, engineer bridge building company, Far East Military District: "Personally Responsible"]

[Text] Unfortunately I have never met Senior Lieutenant A. Yakovlev, who wrote the letter to the editor, though we serve in the same district. But I share the ideas he stated. I also share his dismay with commanders who organize their activities on the basis of the principle "Do as you are told." I also agree that this is a disease that is spread as a result of contact with its "carriers." The young copy the old. All of this is true. But this issue is examined in the letter from only one side--copying a bad work style. I do not think I would be wrong to say that most officers reject such behavior, and orient themselves on positive examples. Even the classmate referred to by the author of the letter to the editor rejected what was evidently popular in terms of the "experience" of compulsion.

I was lucky. I remember my first chiefs with gratefulness: They taught me a lot. Thus Captain S. Starikov, my first company commander, said this to me as we parted: "You will never solve a single problem of combat training without love for the soldier. The platoon commander is a father to the soldier. A soldier must be loved even when he is being punished for a misdeed." He himself followed this principle always in his work. This is why the soldiers never wanted of sympathy from the commander, and why the company was always among the best. And it was somehow easy to serve in it, including for the officers.

I must say in all honesty that I did not have enough experience and knowledge at first, that things did not always go well for me. But the other platoon commanders never gave me a bad time. On the contrary they provided friendly assistance and support. The platoon sergeants also made tactful efforts to help. And the company commander was patient with my mistakes, and he provided good advice. All of this made it possible for me to get on my feet quickly and painlessly.

Why am I telling all of this? Because the case described in Senior Lieutenant Yakovlev's letter is unfortunately still not a rarity. A process of reconstruction is now proceeding actively in the army, as well as in the

entire country. Naturally it has also had an effect on the methods of tightening military discipline. I think that we the officers should begin reconstruction in this area with ourselves. We need to talk less about it, and instead work constantly and resourcefully in the spirit of today's requirements.

As the saying goes, rather than fighting for cleanliness, we should pick up the broom and sweep the dirt away ourselves. Unfortunately there are still those who hold a different point of view. There are also those who have become accustomed to "managing" by methods described in Senior Lieutenant Yakovlev's letter. I think that the sternest measures must be implemented immediately against such sorry commanders.

It is impossible to learn something good from a bad example. One should teach with the positive. The main ways of maintaining firm military discipline are indicated in the Disciplinary Regulations. Among them, the chief way is to instill a communist philosophy, high moral, political and fighting qualities and conscious obedience to commanders in the servicemen. Another is the daily exactingness of commanders toward subordinates. And finally, there are competent and proper use of the measures of persuasion and compulsion, respect of the personal worth of servicemen, and constant concern for them.

There is no need to say that firm military discipline can be found only in a subunit in which all regulations are always observed conscientiously. Unfortunately we can still sometimes find officers who apply them selectively, depending on their mood: Today for example they rigidly follow the letter of the law, tomorrow they will show concern for subordinates, and the day after that, neither. Clearly a subunit with such a commander would lack order.

Let me cite an example. Our company once had a platoon commander who acted in this way. He was called up from the reserves after graduating from the Vilnius Construction Engineering Institute. I remember a certain married soldier that served in his platoon. When that soldier's wife suddenly arrived at her husband's place of work with an infant in her arms, at first the platoon commander vacated his room for her, and then helped her find temporary housing. It looked as if he was showing concern for a subordinate. The soldier was grateful to the commander, and he served well. But his was not enough for the officer. And so he began using the soldier almost like a batman, and when the soldier once attempted to get out of one of the "assignments"--running out for cigarettes--he was strictly punished "for attempted refusal to carry out an order." So goes high "exactingness."

This unseemly behavior was discussed at an officer meeting and by the Komsomol buro. The main purpose, as I now understand, was to focus the attention of commanders on the problems of disciplinary practice. In particular the impermissibility of distorting it was emphasized. A substantial discussion was conducted during the meeting on this important problem of concern to all.

No one was indifferent. I think that many realized that punishment is not a way that a chief takes revenge upon a subordinate, but a measure by which to compel a subordinate to behave correctly. And the measure must be commensurate with the circumstances of the misdeed and the personality of the

soldier. Still, however, the main thing is that punishment must be levied for good reason: The principle of justice must be observed. It was also noted that an officer having people subordinated to him is called upon to be an indoctrinator by the nature of his duty, and consequently he must continually improve his teaching skills, since after all, the main method of troop indoctrination in the Soviet Army is persuasion.

But unfortunately we often limit ourselves to making appeals at meetings, and to conducting discussions, lessons and other collective measures. Sometimes in our emphasis on maximum attendance we forget about the individual that requires individual work. In the latter, I am deeply persuaded, the personal example of the commander is the paramount method.

As we know, it is better to prevent a violation than to have to examine a misdeed. This is why we constantly conduct purposeful indoctrination work with servicemen in our subunit. Here is an example. Private N. Rudko did not always follow the regulations very closely. He sought out confrontation, and he would not wear the proper uniform. It became clear from talks with Rudko and with enlisted men and commanders in his detachment that prior to the army the soldier had little authority among his peers, that this wounded his ego, and that now he was attempting to use provocative behavior to make up for what he did not have before: He wanted to become a leader in the detachment.

The platoon commander and the others explained to him how he could acquire real respect from his fellow workers, and the detachment commander was advised to leave the soldier on his own recognizance more often, to let him take charge of various details. A little time later Private Rudko began showing more interest in his studies, he began asking more of himself, and merits began to appear more frequently on his record of service card.

Trust displayed by a superior always compels a person to shape up. I would even say it inspires him to do better. Thus the detachment headed by Sergeant I. Tudvasev was an unimpressive subunit for a long time. Neither the commander himself nor his subordinates displayed any initiative and zeal in fulfilling their missions. But in one exercise the detachment was given the rather important independent mission of ensuring trouble-free operation of a frame saw at a place where bridge timbers were being procured. You should have seen how the soldiers of the detachment transformed when they were told that the platoon's grade would depend on their work. They worked selflessly, and this was their first step on the road to excellence.

Careful and systematic analysis of disciplinary practice plays an important role in strengthening order. We perform such analysis every week in the platoons and every month in the company. The most instructive cases are analyzed at meetings attended by platoon and detachment commanders, and when necessary, they are also examined at the time that the year's results are summarized. There is one goal here--restoring justice if it had been violated, or confirming, by way of the company commander's authority, the correctness of any disciplinary measures adopted.

Such work prevents distortion of disciplinary practice, and it permits us to teach the company's officers and NCO's to exercise their rights correctly, to

combine measures of persuasion and compulsion, to rely on active party and Komsomol members more boldly, and to make fuller use of the power of public opinion. The skills of commanders in indoctrinating their subordinates are improved concurrently.

Well organized combat training has a beneficial effect on maintenance of tight military discipline. It helps to establish firm order in the subunit, and it disciplines the personnel. This is especially important for soldiers in engineer subunits, the labor of which sometimes seems to outwardly have little to do with combat. When a soldier spends a lot of time working with equipment, he loses some of his military bearing and neatness.

Thus it is all the more important for every lesson to proceed instructively, at a high organizational and methodological level. All subunit personnel must attend lessons. This requirement is known to all. But sometimes a commander must be firm and principled in order to achieve its satisfaction.

It also sometimes happens that both all of the people and the material and technical support are at their peak, but lessons proceed sluggishly, with one or two soldiers studying and the rest sitting around bored. Need it be said that such lessons can do nothing but discourage people?

The reader may object that this example has no bearing on the military discipline problem, that it has to do with the commander using the wrong procedures. True, teaching procedures do have something to do with it. But our soldiers have a secondary education, and many of them have a higher education, and they know quite well the difference between mistakes in procedures that come from a lack of knowledge and those which come from a reluctance to teach. The latter is a discipline problem. An officer who has a developed sense of personal responsibility would never let himself reach such a state.

Thus we once again arrive at this conclusion: In order to successfully tighten military discipline, each of us must first increase our personal responsibility for assigned work. We need to constantly display reasonable initiative, we must work with fervor, and we must not fear bold new concepts. I think we can excuse any mistakes made in the work of a commander who is interested in what he is doing, who performs his duty honestly. But we can never excuse an officer with a callous attitude toward a subordinate, one who performs his official duties mechanically.

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CSO: 1801/79

## COURAGE IS INHERENT TO FRONTLINE SOLDIER

Moscow VOYENNNY VESTNIK in Russian No 10, Oct 86 pp 33-34

[Article by Lt Col A. Kudryavtsev, Red Banner Kiev Military District: "Courage is Inherent to the Frontline Soldier"]

[Text] "The Soviet people also displayed organization and patriotism with exceptional force in the extraordinary circumstances of Chernobyl. The nuclear power plant accident became a severe trial. Laborers, firefighters, engineers, doctors, scientists and soldiers displayed steadfastness, selflessness and courage in that difficult hour."

From the report of CPSU Central Committee  
General Secretary M. S. Gorbachev to the  
June (1986) CPSU Central Committee Plenum

Good things are being said about the brothers Uksusov, officers of a certain chemical defense unit taking an active part in cleaning up the accident at the Chernobyl Nuclear Power Plant. In different years they successfully graduated from the Tambov Higher Military Command Red Banner Chemical Defense School. Within its walls the brothers not only acquired professional knowledge and habits necessary to a chemical officer, but they also received a strong dose of psychological toughening.

They both became subunit commanders, and good specialists. Their ability to teach and indoctrinate subordinates is expressed in the fact that the subunits they lead are at the forefront of the socialist competition. At the present time Senior Lieutenant Nikolay Uksusov is successfully commanding a company, and Lieutenant Sergei Uksusov is a platoon commander. They have gone a long way in shaping high moral and fighting qualities in the personnel. They place their main emphasis on individual indoctrination of subordinates and on the personal example of commanders in combat training, service and day-to-day life.

The officers Uksusov were among the first Soviet people who boldly and decisively joined the struggle against the peaceful atom out of control, without a second thought. They were the first among those real heroes, who fought a duel with a little-known and insidious enemy for many days, displaying exceptional steadfastness and self-control. One would think that we know everything we need to know about radiation, including the physical principles and paths by which it affects the human body. But in reality this was the first time this problem has ever come up, and therefore some surprises and unforeseen difficulties could not be avoided. Surmounting them required exertion of mental capabilities and physical effort.

Disdaining the danger, the chemical officers led their subordinates boldly and resolutely into the raging elements run wild.

After his first trip into the contaminated zone Senior Lieutenant N. Uksusov said: "Of course there was a risk. But someone had to start off the reconnaissance. We knew quite well that we were faced by a mission for which specialists in the chemical troops prepare throughout their entire army career."

In the course of their efforts to clean up the nuclear power plant accident, the officers Uksusov and their subordinates demonstrated high proficiency, endurance and coolness, and an ability to act efficiently in a complex situation. They quickly and correctly oriented themselves as they drove in aboard vehicles offering limited visibility. They worked their instruments faultlessly as they measured the radiation levels and the degree of radioactive contamination of various objects. The subunit commanders controlled their subordinates firmly, they displayed tactical competence in generalizing their intelligence, and they reported it promptly to their senior chief. All soldiers used personal and collective protective resources competently.

Figuratively speaking, as a result of the efficient work of the chemical scouts we were able to capture an important beachhead from the enemy--perhaps inanimate, but nonetheless extremely dangerous. Information obtained from the scouts made it possible to objectively evaluate the radiological situation. It became clear to members of the government commission controlling the clean-up operations where the greatest danger lay, where armored or conventional vehicles could travel, and the places and directions from which it would be best to initiate the attack on Power Block No 4 so as to minimize exposure of people to radiation.

I would like to relate one good tradition that confirmed itself long ago in this same chemical defense unit. It has become the rule here that officers, warrant officers, communists and active Komsomol members are the first to perform every difficult task, especially one involving danger and even risk. By their exemplary actions they not only teach the soldiers through personal example, but they also inspire confidence in success.

So it always was on the confidence courses, on the training grounds, and in other lessons and exercises conducted with the purpose of toughening the



personnel psychologically. So it was in Chernobyl as well. Wherever it was the most difficult and dangerous, there went the best prepared, the spiritually and physically strongest. In this case the officers often took charge of patrols, of the crews of obstacle clearing vehicles, and of the crews of other specialized equipment. And in some cases, for example when conducting aerial radiological reconnaissance, in the first while they assumed the responsibilities of dosimetric operators.

Of course, this was not done because the officers were unsure of their NCOs and enlisted men. "We have no doubt at all in their high proficiency," explained Major Ye. Ishin, an experienced commander. "On the contrary we were certain that they could fulfill any mission required by their specialty." The principle "Do as I do" has become firmly entrenched in the training and indoctrination practice of the chemical officers. It is also well known that on the fronts of the past war, commanders and communists were always the first to rise to the attack. There are also many examples of this sort in the unit's combat history. It is in relation to the frontline heroes that the present generation of Soviet soldiers models itself.

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CSO: 1801/79

## ASSISTANT GUARD CHIEF

Moscow VOYENNIY VESTNIK in Russian No 10, Oct 86 pp 35-36

[Article by Capt B. Kudzayev, battalion chief of staff, Ural Military District: "Assistant Guard Chief"]

[Text] "Guard duty is the performance of a combat mission, and it requires alertness, unswerving decisiveness and initiative from the personnel." So reads the USSR Armed Forces Manual of Garrison and Guard Duties.

Once while inspecting the guard I turned attention to the fact that the assistant guard chief was not very well versed in the rules of service of a guard at his post, and that he briefed reliefs about to assume their posts uninspiringly. Of all of his responsibilities the only one he picked up on was that of keeping the guard room clean and orderly.

Thinking about what I saw, I came to the conclusion that we often forgot about the training of such an important official. To make up, during lessons on the manuals the company commanders began personally testing the knowledge of NCOs appointed to serve as assistant guard chiefs. The officers tried to see that they would not only assimilate their responsibilities but also learn well what the duties of a guard chief are. It would be sufficient to point out the in the course of a day, the assistant must fill in for the guard chief on several occasions.

With time, we developed a procedure for training assistant guard chiefs. This procedure has been well received. Here for example is how Sergeant S. Loktionov, one of the best detachment commanders, prepared himself for assumption of his detail. First of all he went over his responsibilities and those of the guard chief during self-study hours. He went over the procedures for mounting and relieving the guard, its inspection and the order of loading and unloading weapons once again. In addition he studied the instructions to the guard chief and the posting timetable.

Thus by the time of the lesson on manuals conducted by company commander Senior Lieutenant G. Rudenko, Sergeant Loktionov was ready to answer all questions.

Using mock-ups of the facilities to be guarded, company commander Senior Lieutenant Rudenko tested his subordinates and firmed up the routes traveled by their relief, and the locations of fire extinguishers and communication points.

Under the guidance of a guard of the first relief the guards at each post studied the special responsibilities of a sentry, and they determined where the fire extinguishers were, what the sectors of observation are, and how and from where a guard can communicate with the guard room.

A practical exercise was started at the time indicated in the daily routine. The company commander formed three study groups. The students traded places every 10 minutes. In addition the officer also foresaw exchange of the lesson leaders--the guard chief, his assistant and the NCO in charge of reliefs. These persons, particularly assistant guard chief Sergeant Loktionov, taught the soldiers the things a sentry does when his post is attacked or in case of fire, they practiced the procedures of relieving the guard, of accepting and surrendering a post and so on. Thus the assistant guard chief was an active participant of the practical exercise.

As an example he introduced the following input: "Private Zaikin, you are standing at your post, and you notice smoke seeping out of the doors of the warehouse."

Private V. Zaikin reacted as prescribed by the regulations.

During the guard chief's time off, after each relief returned from its posts Loktionov allotted battle tasks to the soldiers and told them what to do in case of attack and fire. He recorded signals communicated by the sentries from their posts every time they returned from their patrols. He made sure that the sentries complied with the rules of loading and unloading weapons and with safety measures, and that all persons of the guard setting off for their posts left their matches and cigarettes behind in the guard room.

Most NCOs of our battalion understand the need for vigilant guard duty. For example when he was serving as the assistant guard chief, Senior Sergeant G. Paskal acted efficiently in response to a fire at a certain storage site. The personnel were immediately alerted, and Senior Sergeant Paskal reported the incident to the guard chief, who was off at that time, and to the unit orderly. Reserve groups went to the place of the incident, and soon the fire was put out.

I would like to emphasize in conclusion that careful preparation of personnel assuming the guard, including the assistant guard chief, is a guarantee of successful fulfillment of the mission.

#### Practical Exercise

1. Forming up the guard, announcing the study subjects and objectives, distributing the personnel into study groups--3 minutes.

2. Inputs: an attack on the post and the sentry, a fire--10 minutes.

Actions of the lesson leader: Posts a simulated sentry and sets up a target simulating an intruder. Emphasizes to the students that being sentries, they should use their weapon only if after a warning shot into the air the intruder fails to halt, and attempts to penetrate to the guarded objective (the post) or flees after such an attempt.

Simulates a fire at the post. When necessary, repeats the input and grades the actions of the sentry. Demonstrates the use of different fire extinguishing systems.

Actions of the students: All persons approaching the post or the boundary of a posted prohibited zone, except the guard chief, his assistant, the NCO in charge of reliefs and persons accompanied by the former, are stopped by the sentry, who shouts "Halt, turn back," or "Halt, detour right (left)." If the individual approaching the post or the boundary of the prohibited zone fails to heed this demand, the sentry warns the intruder by shouting "Halt, or I'll shoot" and immediately summons the guard chief or the NCO in charge of reliefs.

If the intruder does not fulfill this demand, the sentry loads a round into the chamber and fires a warning shot into the air. If the intruder fails to fulfill this demand as well and tries to penetrate to the post (cross the boundary of the prohibited zone) or to flee, after such an attempt the sentry uses his weapon.

3. Relieving sentries, accepting and surrendering a post--10 minutes.

Actions of the lesson leader: Emphasizes that during relief of sentries one of the guards must keep the post and the approaches to it under observation. Reminds the soldiers that a guard officially becomes a sentry (a sentry becomes a guard) after he reports assumption (surrender) of the post. Posts a simulated sentry by a mock-up of a storage site, and relieves the sentries one at a time.

Actions of the students: When the relief approaches, the sentry faces it and independently shifts his assault rifle to "Sling arms" position. Then in response to a command from the NCO in charge of the new guard, for example: "Private Petrov, to your post, forward, march," the sentry takes a step to the right, the guard approaches the sentry and stands in his place facing in the opposite direction. When a post is surrendered verbally, the sentry must report to the guard assuming the post anything that may have been noticed near the post during the watch.

4. Loading and unloading a weapon--10 minutes.

Actions of the lesson leader: Forms up the guards at the training location into a single rank and demonstrates the procedure for loading and unloading a weapon. Reminds the students that when loading the weapon, they do not ram

the cartridge home into the chamber. Makes sure that when the assault rifle is being loaded and unloaded its barrel is pointed upward (at a 45-60° angle) and away from surrounding residential buildings and the protected facility.

Actions of the students: In response to the command "Relief, one at a time from the right, load," the soldiers take a step forward one at a time, fix the bayonet and load the weapon. When unloading the weapon the soldiers make sure that the safety is engaged on the assault rifle after the trigger is released.

5. Obtaining ammunition and loading magazines--4 minutes.

6. Summarizing the lesson and assigning tasks--3 minutes.

Evaluating the preparedness of the personnel for guard duty, the lesson leader points out the shortcomings and the deadlines for correcting them. Instructs the soldiers to serve vigilantly and to comply with safety rules when handling weapons.

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## USING TRAINING RESOURCES

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 37-38

[Article by Sr Lt V. Shcheglov, company commander, Leningrad Military District: "Using Training Resources"]

[Text] The troops have accumulated a certain amount of experience in using trainers, equipment, mock-ups and other training resources in the training process. Competent use of this equipment in physical training significantly increases training effectiveness, reduces the time it takes for soldiers to prepare for actions involving large physical loads and mental tension, and makes it possible to develop the necessary applied military skills faster.

Referring to an integrated physical training exercise conducted recently in our tank training company as an example, I will show how we use training resources to train the personnel. I conducted instructor training for the detachment and platoon commanders on the day before the exercise. We worked out the order of the study problems and determined uniform procedures for carrying out different movements and actions. In addition the officers and NCOs themselves worked out on the gym equipment. Then I studied the recommended literature and drew up the lesson plan (an excerpt from it is presented below).

The company arrived at the exercise location. After announcing the study subject and objective (teaching the personnel to perform exercises that would develop strength, agility and endurance using training resources), I ordered the subunit to open ranks. Running in step while maintaining proper dress was alternated with marching to attention. I made sure that the soldiers correctly assumed the position of attention each time after fulfilling general strengthening exercises of the arms, legs and body.

I would like to emphasize that it is extremely important for the exercise leader to give his preparatory commands clearly. Let me relate them in the sequence in which they were given after the study subject and objective were announced.

"Company, in a column of two. First platoon, as you were, the rest right turn, forward, march."

After 40 meters: "Double time, march."

The company runs one circuit as I call out the cadence.

The soldiers raise their knees high as they run.

1. Starting position--hands on the waist: "Assume starting position."

"Ready, begin." I count out the exercise to make sure it is performed correctly.

Running 40 meters: "Ready, halt."

"Company, forward, march."

2. Count of one--arms out to the sides, two--arms up with palms inward, three--arms out, four--arms down.

I demonstrate.

"Ready, begin." The exercise is performed four times.

"Ready, halt."

3. At the counts of one and two--forward hops with the arms bent at the elbows, three and four--with the arms out to the sides.

I demonstrate.

Starting position--arms in front of chest: "Assume starting position."

"Ready, begin." Four series of exercises are performed at four counts each.

"Ready, halt."

4. Body twists.

Starting position--arms folded in front of chest. "Assume starting position."

"Ready, begin." The exercise is performed four times.

"Ready, halt."

5. "Company in a column of four, march." "Halt." "Left, face."

"Squat, one, legs back, two, squat, three, up, four."

"Ready, begin."

6. "Squat with arms up--one; bend forward, legs straight, arms forward--two; squat, arms forward, palms down--three; up--four."

7. "First group exercise, 16 counts, begin."

8. Training for mounting and dismounting gymnastic apparatus.

"Squat, arms back--one; jump forward, arms up, bend over--two; squat, arms forward--three; up--four." This exercise is performed four times.

After completing the preparatory exercise, the platoons moved to the locations of the primary exercise in a column of two. There, under the guidance of their commanders they began their exercises at the training locations. This lesson was unique in that I divided the company into two study groups. The first worked on horizontal bars, parallel bars and benches. The second exercised with free weights and logs.

Supervising the actions of the students, I required them to fulfill the same exercise several times (not less than four times). I made sure that the soldiers trained in pairs (one performed the exercise while the other spotted). Coordination of the actions of detachments and platoons and well organized exchange of places are very important here, since the training time with each apparatus is limited to 1.5-2 minutes.

Let me present the commands which I gave in this lesson.

"First and second platoons--horizontal bars, third and fourth platoons--free weights. To your lesson locations, double time, march." "Company, halt. Left face."

Power training. I give the command: "Company, ready, begin."

The platoon commanders command: "Platoon (pull-ups on the horizontal bar, leaping onto one bar of the parallel bars, sit-ups on benches), ready, begin."

I command: "Ready, halt. For change of places, company, right face; double time, march. Company, halt. Left face. Platoon commanders, ready, begin."

I command: "Ready, halt. Company, right face."

This ends the exercises on the horizontal bars and benches, and the exercises with weights and logs. I give the command to move the company to the power trainer: "Move your detachments to the trainer line, first platoon, first, second and third lines; the rest behind them. Double time, march. Company, halt, left (right) face. Approach apparatus."

A few words about the trainer. It is set up in the form of several lines of apparatus making it possible for 13 groups of nine persons each to perform different exercises simultaneously and independently of each other. Each line of identical apparatus of this trainer works a certain muscle group. A total of up to 150 different exercises can be performed on this trainer.

And so, in response to my command the detachments exercise on the power trainer. The load is high. Every 20 seconds the detachments trade places, alternating marching to attention and double-timing. In the allotted time a



student performs 10-12 movements on each apparatus.

After exercising on the power trainer, which takes 10 minutes, I conducted a relay race carrying a log 60 m as a cool-down procedure. Lieutenant S. Kamnev's platoon had the best time.

The integrated exercise terminated with a 2 km run.

## Lesson Plan

### I. Preparatory Phase--7 Minutes

#### 1). Announcing the Study Subject and Objective--1 Minute

Actions of the lesson leader: Receives the report from the commander of the 1st platoon, checks attendance and inspects the uniform. Leads the company to the exercise location, announces the study subject, objective and problems. Begins the preparatory phase with the company as a whole.

Actions of the students: The company is formed into two ranks. The commander of the 1st platoon reports the readiness of the personnel. The company moves to the exercise location. The preparatory phase begins.

#### 2). Walking, Running, Performing Preparatory Exercises--6 Minutes

Actions of the lesson leader: Gives the commands to perform the movements and exercises for arm, leg and body muscles, and makes sure that the students perform the exercises sharply.

Actions of the students: In response to the commands the personnel perform general warm-up exercises. Walking and running are supplemented by movements and actions of hand-to-hand combat.

### II. Main Phase--40 Minutes

#### 1) Performance of Exercises on Multiple-Span Gymnastic Apparatus--10 Minutes

Actions of the lesson leader: Makes sure that all exercises are performed by the whole platoon on the horizontal bar and parallel bars in ranks (the first performs the exercises while the second spots. Exercises are performed in three sets of five to six repetitions each). Makes specially sure that the soldiers complete their exercises with maximum repetitions on individual apparatus of the power trainer.

Actions of the students: Soldiers perform pull-ups and rolls on the horizontal bar. On the parallel bars they stand to the side, grasp one bar with their hands and jump, landing on one bar; then they do dips.

## 2) Power Trainer--10 Minutes

Actions of the lesson leader: Makes sure that each detachment performs exercises on different trainer lines. Places are exchanged at his command after 12-15 repetitions of each exercise.

Actions of the students: Line 1--raise weights on pulleys; knee bends while supporting a bar on the shoulders. Line 2--arm curls with hand weights; bench presses. Line 3--leg presses; counterweight arm exercise. Line 4--overhead press, triceps exercise. Line 5--leg lifts; single leg presses with arm support. Line 6--pull-ups on parallel bars; rollover on parallel bars with leg support.

## 3) Exercises with Free Weights--10 Minutes

Actions of the lesson leader: Makes sure that the detachments do their exercises together. Promptly exchanges the detachments. Trains subordinates at maximum repetitions.

Actions of the students: The soldiers perform weight lifts, bench presses, push-ups, body twists and deep knee bends, turning special attention to breathing properly during the exercises.

## 4) Fast Travel for 2 km--10 Minutes

Actions of the lesson leader: Makes sure that the soldiers run in a compact group without stringing out into a column, and that they maintain formation discipline.

Actions of the students: The soldiers form up into a column of four and run 2 km at a moderate pace.

## III. Concluding Part--3 Minutes

The lesson leader gives the command to perform cool-down exercises.

The lesson leader summarizes the lesson results.

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## FAR EASTERN TRIANGLE

Moscow VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 39-41

[Article by Col (Res) A. Pyastolov: "Far Eastern Triangle"]

[Text] Dear editor! One seminar I attended discussed Washington's neoglobal policy, and particularly the USA's intrigues in the Asian-Pacific region. But I would like to know more about this than the group leader told us, and I would like to see an article in VOYENNNYY VESTNIK on the intentions of the imperialists to hammer out a new trilateral military alliance.

Respectfully,  
Sr Lt V. Dubinin,  
Turkestan Military District

It is noted in the political report of the CPSU Central Committee to the 27th CPSU Congress that "the right wing of the USA's monopolist bourgeoisie continues to look at growing international tension as a justification for military allocations, global claims and interference in the affairs of other countries...." American ruling circles are trying to create a global strategic military bloc turned against the Soviet Union and other socialist countries primarily.

Washington believes the Asian-Pacific region to be an arena of military-political confrontation with the forces of peace and socialism. CPSU Central Committee General Secretary M. S. Gorbachev said this in his speech in Vladivostok: "Since the second half of the 1970s the USA has been undertaking major measures to increase armed forces in the Pacific Ocean." The USA is attempting to hammer out yet another militaristic bloc--an "Asian NATO."

Besides the USA, Washington has included the following countries on the roster of this bloc: Canada, Japan, South Korea, Australia, New Zealand, and countries in the Association of Southeast Asian Nations--ASEAN: the

Philippines, Thailand, Singapore, Malaysia, Indonesia and Brunei. American strategists plan to tie NATO into this new military alliance by way of the USA and Canada.

According to the Pentagon's plans a trilateral military alliance including the USA, Japan and South Korea should become the basis of the new aggressive bloc. In the opinion of the American administration there are real possibilities for creating such a "Far Eastern triangle." Both the Japanese and the South Korean governments are prepared for this. The United States concluded bilateral "security treaties" with Japan and South Korea long ago. In accordance with them, a dense network of American military bases has been created on the Japanese islands and in the southern part of the Korean Peninsula, and large contingents of U.S. Armed Forces possessing nuclear weapons are stationed there. The territory of these countries and their sea and air space are actively being saturated with American nuclear weapon delivery vehicles and with command and communication centers controlling delivery of these weapons. In other words these countries are being transformed more and more into a nuclear springboard for an attack on the USSR, North Korea and other socialist countries.

As an example the United States has over 120 military bases and facilities in Japan; their maintenance costs the Japanese people more than \$1 billion per year. Around 50,000 servicemen, or almost a third of all American troops deployed in the West Pacific, are stationed there. Up to 200 warplanes and auxiliary aircraft are based permanently in Japan. Since April of last year, F-16s carrying nuclear weapons and capable of reaching Soviet territory have been stationed at Misawa, in the northern part of Honshu. There are plans to have more than 50 such fighter-bombers there by 1987. According to reports in the Japanese press American nuclear weapons are being stored and a secret command post for wartime control of the combat activities of the U.S. Air Force in the Far East has been erected at Misawa. The Pentagon obtained the consent of Japan's ruling circles for B-52 strategic bombers to use the country's air space. Two landing strips at Kadena Air Force Base, the largest on the island of Okinawa, can accommodate these airplanes.

Japanese ports are perpetually being visited by American warships carrying nuclear weapons, including Tomahawk missiles. Carrier-based ground-attack aircraft of the carrier "Midway" and of ships in the task force based at the port of Yokosuka are equipped with nuclear weapons. This port is the location of the headquarters of the American Seventh Fleet.

One of the largest strategic communication centers is located in Yokota--the location of the headquarters of American troops in Japan and of the 5th Air Army, deployed in Japan and South Korea. It maintains round-the-clock control over American ships and airplanes conducting combat patrols, and the forces and equipment of military bases in Japan and South Korea. The United States is creating strategic reserves of arms and materiel on Japanese territory.

The Pentagon is managing to stockpile heavy armament on the island of Hokkaido, which would allow it to increase the grouping of American troops on Japanese territory. According to the Japanese press there are plans for

building radar stations here with a range of up to 4,000 km intended to support the actions of the U.S. Navy and Air Force and to conduct electronic reconnaissance on Far Eastern regions of the Soviet Union. Official Tokyo expresses total solidarity with Washington's nuclear strategy, which foresees, in particular, a "pre-emptive nuclear strike."

There are 40 American military bases in South Korea, at which over 40,000 enlisted men and officers are stationed and which possess over a thousand units of nuclear ammunition supported by various delivery vehicles--around 150 American fighter-bombers, missiles and nuclear guns. South Korea surpasses the NATO countries by a factor of four in the density with which its territory is saturated by all forms of nuclear warheads. Moreover American warships carrying nuclear weapons are constantly present in the South Korean ports of Chinhae and Pusan. There are plans for deploying cruise missiles equipped with nuclear warheads and neutron weapons in South Korea. A plan for deploying a new generation of chemical weapons--binary weapons--in the southern part of the Korean Peninsula was approved with the full consent of the Seoul government.

The Japanese press reported that the Washington administration is advertising plans for a so-called regional defense initiative in the Far East. In the opinion of Pentagon strategists this will make it possible to actively include Japan and South Korea in "Star Wars" preparations, and to activate cooperation among American, Japanese and South Korean militarists in Southeast Asia. The basic groundwork for creating the mechanism by which the USA's Far East partners are to participate in the strategic defense initiative is already being created.

In its plans for "Star Wars," the Pentagon is displaying keen interest in the developments of Japanese businesses concerned with the next generation of supercomputers, lasers, the latest communication equipment and missile guidance systems, and optical fibers. It is also interested in electronic, metallurgical and chemical industry in South Korea. In turn, some people in Japan feel that participation in the strategic defense initiative would help the country rise to the ranks of the leading world powers, including in military respects.

The military appetites of the USA's Far Eastern allies are growing as well. This is manifested chiefly through growth in the material foundation of the fighting power of Japanese and South Korean armed forces, and through expansion of their cooperation with American armed forces deployed in the Pacific Ocean area.

Japanese "self-defense forces" are outfitted with modern combat equipment and armament, and they are capable of executing missions beyond the defensive framework right now. The strength of the country's armed forces is over 270,000. The armed forces contain 13 divisions, including one tank division, 900 airplanes and up to 170 warships and auxiliary vessels. In the estimates of Western specialists the strength of Japanese ground troops has almost reached the level in Great Britain, while in terms of quantitative indicators for the principal types of arms, they are in fourth or fifth place among the USA's allies in NATO. The Japanese Navy noticeably surpasses the U.S. Seventh

Fleet in ship tonnage. But this is not even the limit yet. The technical framework of Japanese industry is such that military production can be doubled in short time; right now it can provide all kinds of weapons except nuclear to the "self-defense forces." Seventy percent of the composition of the country's armed forces are officers. This creates conditions permitting the country to arm hundreds of thousands of persons in a short period of time.

Military authorities feel that Japan is capable of initiating production of nuclear missiles at any time.

The military program for 1986-1990 serves the goals of enlarging Japan's "militaristic muscles" further; 18.4 trillion yen have been allocated to this program--a time and a half more than in the previous 5 years. Japan's military expenditures are growing faster than those of the NATO countries.

The new military program foresees purchasing combat equipment and armament for the "self-defense forces" at a cost of 5 trillion yen. Ground troops will receive 246 tanks (there are plans for transferring 140 of them to Hokkaido), 277 guns, 43 antitank helicopters and 54 ground launchers for antiship missiles. The air force will acquire 63 F-15 Eagle fighter-interceptors (as a result of which their total number will be 187) and five E-2C Hawkeye early-warning airplanes (raising their total to 13).

There are also plans for reequipping the air force's missile forces. Hawk missiles will be purchased, and Nike missiles presently in the inventory will be replaced by Patriot missiles. Nine "Aegis" class destroyers--larger than the ships presently in the inventory, five submarines, 50 P-3C Orion antisubmarine airplanes (their total number will be 94), 66 carrier-based antisubmarine helicopters and 12 mine-clearing helicopters are to be purchased for the navy.

South Korea's 700,000-strong army also far exceeds the needs of the country's defense. Specialists believe that in terms of its fighting power, it is ranked somewhere at the top in its region. Seoul's military expenditures are increasing at a rapid pace. This year 4.3 trillion won have been allocated for these purposes, which is almost 13 percent more than in the previous year. Militaristic allocations typically represent almost 40 percent of the country's entire budget. A significant fraction of the assets are intended for acquisition of primarily offensive forms of armament and combat equipment from the United States, including modern F-16 fighter-bombers, missile destroyers, missiles and helicopters.

Nor should we be complacent to the fact that Washington is increasing its "military assistance" to the Seoul regime from year to year: This year it will exceed \$230 million. And in 1985-1989 the Pentagon intends to supply combat equipment and armament to South Korea worth \$8 billion. Moreover South Korean industry itself is satisfying a significant part of the army's needs.

Measures aimed at coordinating the actions of American, Japanese and South Korean armed forces are being forced, and major operational and combat training is widening. As an example up to 25 large American-Japanese maneuvers and exercises are conducted each year with the participation of air

and naval forces. Joint ground troop exercises to which American formations and units are sent from the Hawaiian Islands and the continental United States have been going on since 1982. These military games are clearly anti-Soviet in nature. They are usually conducted in the northern part of Japan. And it is no accident that U.S. Secretary of Defense C. Weinberger began his visit there in spring of this year with a provocative inspection of "self-defense forces" located on the island of Hokkaido by the USSR border. An exercise of the 7th Division of the Japanese ground forces was organized for his benefit there. The troops exercised in "penetrating enemy positions" utilizing the latest tanks, self-propelled howitzers and helicopters. The Pentagon chief declared then to reporters that the United States viewed Hokkaido as one of the key regions of military confrontation with the Soviet Union. And these are not just empty words. Green Beret detachments are being transferred to the island from Okinawa for actions which according to the American military command are similar in their nature to what would be encountered in countries in which the Pentagon is preparing to do battle. American-Japanese air exercises, which involve operational missions of "repelling a threat from the north" by the methods of "pre-emptive strikes," also have an anti-Soviet orientation.

Japan readily accepted the responsibility of blockading international straits (La Perouse, Sangarskiy [transliteration], Korea) and protecting marine lines of communications with its "self-defense forces" thousands of miles from its shores in "extraordinary circumstances." What this actually means is transfer of part of the functions of the U.S. Seventh Fleet to the Japanese navy and air force. Bases for Japanese naval and air forces are being erected on the island of Iwo Jima 1,200 km from Tokyo. Japanese naval forces participate in major RIMPAC exercises together with the navies of the USA, Canada and Australia; Great Britain also became a participant in 1986.

Each year since 1976 provocative "Time Spirit" maneuvers have been conducted in South Korea with the participation of American and South Korean troops. The scale of these maneuvers is continually increasing. While 10 years ago 46,000 American and South Korean servicemen took part in them, this year almost 210,000 took part. In addition to American troops deployed on the South Korean Peninsula, large contingents from formations of the rapid deployment forces were transferred there; aviation and a huge naval task force including the carrier "Midway" and missile cruisers were sent there as well.

Military cooperation between Japan and South Korea is widening. Officers of the South Korean naval and air forces train at Japanese military bases, and representatives of Japan's National Defense Administration act as observers at American-South Korean maneuvers. The National Defense Administration plans to send a Japanese expeditionary corps to South Korea in the event of "extraordinary circumstances." Back in 1983 Tokyo loaned Seoul \$4 billion, chiefly for military purposes.

Thus the facts show that the malicious Washington-Tokyo-Seoul military triangle is becoming a reality. And unless we halt this development of events in the region, so dangerous to peace, international tension may be increased further.

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## FOR GROUP AND INDIVIDUAL TRAINING

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 p 42

[Article by Col O. Vladimirov: "For Group and Individual Training"]

[Text] Efficiency experts of the fighting vehicle department of the Kazan Higher Tank Command School imeni Presidium of the Tatar ASSR Supreme Soviet are doing much to make the training process maximally effective. The innovators are aided in their creative search by the technical advances exhibited at the Exhibition of the Achievements of the USSR National Economy.

Thus officers visiting the exhibitions "Scientific-Technical Creativity of Youth" and "RSFSR VUZ Scientists in Aid of the National Economy" and the Vocational-Technical Education Pavilion showed interest in the "Technical Training Resources" section. They adopted the principles of operation of some devices designed to upgrade training quality, and they manufactured a ground navigation apparatus trainer through their own efforts.

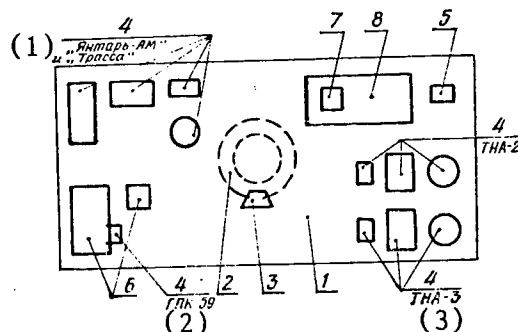
This trainer is intended for group and individual study and practical assimilation, by future officers, of navigation apparatus installed in armored equipment. The students learn the habits of working with the apparatus and servicing it. The trainer makes effective use of training time and economization of engine life possible.

One student shift totaling four persons practices preparing data for various instruments for 15 minutes. During the lesson the trainer is maintained by a laboratory technician.

The trainer (see diagram) is mounted on a rotating platform (1). The lower race of a tank turret is used as the motionless support (2). It is installed on a frame made from steel I-beams. The upper race of the turret serves as the platform foundation. The platform is welded out of steel corners, it is lined with boards, and it is covered by linoleum. An electric turret turning mechanism (3) is used to rotate the platform.

Several types of navigation apparatus are located on the platform together with associated equipment (4). Motion of the object is simulated by an

electric drive motor (5), and course changes are simulated by turning of the platform from the driver-mechanic's work station (6) or from the instructor's console (7) located on work table (8).



Key:

- |                             |          |
|-----------------------------|----------|
| 1. "Yantar-AM" and "Trassa" | 3. TNA-3 |
| 2. GPK-59                   |          |

When the trainer is to be used in practical lessons on military topography, the apparatus is prepared for work and raw data are fed into it. Simulation of the object's motion begins after the gear lever is shifted into one of its fixed positions. The electric drive motor turns on, and the course sensor begins to "measure off" the distance traveled. The data are fed to a coordinator.

Course change is simulated by rotation of the platform by control levers that are connected to a potentiometer on the electric turret rotating mechanism. Data from the course sensor are also fed to the coordinator, where the rectangular coordinates of the vehicle's position are generated.

The trainer is also used during self-study hours by students studying the mechanics of different types of navigation apparatus and the rules of its operation.

The experience of this department demonstrates that further improvement of technical training materials, creation of new trainers and their effective use are an important aspect of the activities of instructors. They devote their main attention to developing training resources to be used in the study of new equipment and armament and making it possible for students to attain a high level of training through practical work in short time.

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## INNOVATORS' RELAY

Moscow VOYENNNY VESTNIK in Russian No 10, Oct 86 p 43

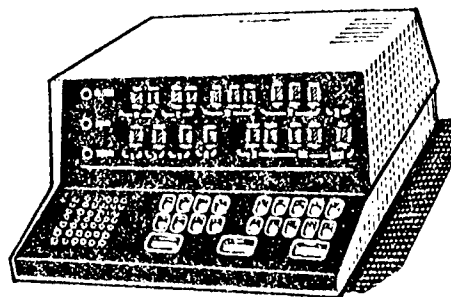
[Text] Information on technical innovations shown at the Exhibition of the Achievements of the USSR National Economy is based on materials from the exhibit "Accomplishments of Efficiency Experts and Inventors in Transportation."

### Monitoring and Control Point (PKU)

The PKU is intended for work as part of the technical resources of an automated urban passenger transportation control system.

The PKU provides for simplex loudspeaker communication between a dispatcher and a transportation driver, and it displays current and reference information on traffic in digital form.

The PKU uses sensory controls.



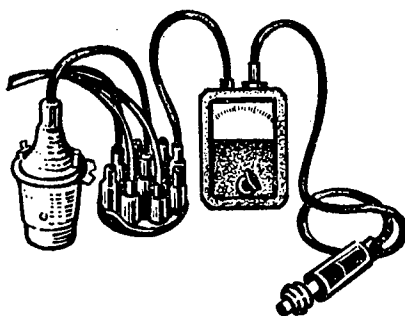
### Characteristics

Display	Digital
AC power, V (Hz)	220 (50)
Consumed power, V.amps	60
Dimensions, mm	453x485x217
Weight, kg	13

## Ignition System Tester

This tester can be used to check the serviceability of motor vehicle sparkplugs and ignition systems. The quality of a sparkplug is determined from the amount of current flowing through its electrodes, while the work of all other elements of the system is determined by comparison with a properly operating sparkplug.

A person using the tester can reveal a faulty sparkplug and carbon deposit on the central electrode, he can measure the gap, he can find breaks in the secondary winding of the ignition coil and in the high-voltage conductor, he can check the condition of the supplementary transistor at the conductor terminal, and he can detect breakdown of conductors in the distributor cap and a faulty capacitor.

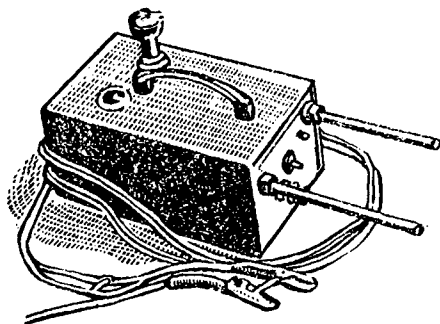


### Characteristics

Type	Portable
Working voltage, kV	30
Dimensions, mm	200x40x40
Weight, kg	0.2

## Speedometer Tester

This tester can be used to check the speedometers of LAZ buses without removing them from the vehicle. It consists of a 12 volt electric motor and a rheostat connected in series. The rheostat, which is joined to the voltage cut-off, can be used to change the motor rpm.



A pilot lamp on the instrument's upper panel signals that the device is ready for work. The device is secured to the speedometer sensor to be tested by two pins and a special adapter connected to the shaft of the electric motor. The serviceability of the speedometer is determined from deflection of a pointer.

#### Characteristics

Type	Portable
Circuit voltage, V	12
Weight, kg	1

Attention readers: The editor's office will provide addresses from which to obtain additional information on the technical innovations on request. We await your letters on introduction and use of the technical innovations in the training process, and in operation and maintenance of armament and military equipment.

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## LEARNING FIRE CONTROL

Moscow VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 44-46

[Article by Col P. Boyko: "Learning Fire Control"]

[Text] I was motivated to write this article by what Major General (Reserve) A. Nikolyuk said in VOYENNNYY VESTNIK (No 12, 1985) about raising the effectiveness of officer and subunit training. I would like to describe how my comrades are solving the same problems. I cannot cover all issues which from my point of view would be interesting to commanders and political workers. This is impossible in a single article. I will talk only about fire training and fire control training for officers.

One might think that the whole matter is quite clear. Having acquired a solid reserve of knowledge in school and even at the academy, the professional gunner could relax, it would seem. But gunnery, and field firing even more so, is a stern judge. It severely punishes those who are too self-confident. What happens to them is the same thing that happens to athletes who violate their training schedule in the hope that their capabilities would make it possible for them to get in shape just before competition. Failure also follows the military man who forgets that only intense daily training and practice leads to the pinnacles of proficiency.

This is remembered quite well in the units in which officers P. Kutorlanov and S. Loy serve. The officers of this unit study firing theory and practice hard. Experts and outstanding teachers such as Yu. Kabakov, O. Kostrov, V. Starchenko and others give regularly organized lectures on so-called difficult forms of firing--for example with time fuses. Of course, these lectures lay emphasis not on the basics or even on the principles of the subject, but rather on the things that require repetition to ensure better assimilation of changes in particular rules of fire and fire control later on. I am referring to theoretical substantiation of the methods of fire, the principles of the gunnery training course, and practical accomplishments of the best gunners. The main goal of these applied lectures is to continually improve the abilities of commanders and to achieve conscious application of theoretical knowledge in all cases.

I am impressed by the fact that the lecturers try to make the training visually interesting: They create their own diagrams, tables and figures

illustrating the essence of the problem. Sometimes they simply post a drawing, which the students look at and briefly discuss, and the students are able to grasp everything clearly. Saved time can be used for deeper study of another problem of greater complexity, or group training can be employed one more time in regard to a particular study problem.

Now a few words about independent work. Here is a truly effective means of raising the level of both knowledge and abilities! Experienced commanders never forget to use this form of assimilating new material and repeating old material. They spare neither time nor effort to organize self-training. They try to make sure in this case that, first of all, the plan for self-training allows the student to select the necessary reading on his own, with only the most sensible means of attaining the study goal being recommended; secondly they try to make sure that the plan is coordinated with problems that will be discussed later on. This principle also lies at the basis of individual assignments.

All of this does of course help to keep the level of the occupational knowledge of the officers high, and to improve the knowledge of those who fall behind.

For a long time it was hard for Officer I. Kulinich to determine the settings for destruction fire by the total calculation method. His immediate supervisor set up an individual program of independent work for him and indicated the ways to correct his deficiencies. Some time later the officer was ordered to fulfill a complex fire problem. He successfully handled his responsibilities and received a high score.

Usually during self-training time commanders and political workers study the rules of fire, they read training literature, including articles published in journals, and they carry out individual assignments. But no matter how well organized self-training is, its effectiveness quite naturally falls without constant control.

As an example independent study was left to its own devices in the subunits in which officers V. Zigora and G. Ogryzko serve. No steps were taken to improve the combat training of the personnel. As a result they received poor scores in their final gunnery tests. To keep this from happening again the units mentioned above are now checking the quality with which individual assignments are carried out by conducting twice-weekly competitions for best solution of written fire and fire control problems, and they are conducting systematic fire training using simulation resources and rifle ranges.

As far as practical lessons with officers in the field are concerned, they are especially popular. They are validly treated as the principal form of teaching accurate fire and fire control. The objective followed in their planning and conduct is to work out all of the methods of preparing for fire and of firing on diverse targets in different conditions in the course of the training period.

And now about training exercises. A large part of the training time is devoted to them, which is justified from all points of view. They are often

conducted at the battalion level. As a result a possibility appears for working out all training problems without exception. I mean both those associated with preparing for fire and with the fire control process, and those that must be worked out if coordination and the combat skills of all levels of control and of the subunits themselves are to be improved. As a rule the subunits train together with control personnel.

The battalion combat formation is organized in these cases with reduced intervals and distances. Gun positions are determined topogeodesically in relation to prominent landmarks using arbitrary coordinates. Working out their reconnaissance problems, the gunners learn to fire for target kill.

As was noted above, battalion field training is a good school for all the personnel, including officers. After all, all of the reconnaissance and control resources and the artillery subunits participate, which makes it possible to cover all of the problems encountered by a commander in the performance of his functional responsibilities. Time-and-motion studies are made of the combat activities of all subunits and specialists, and their precision is checked by control groups.

I would like to discuss one of the battalions in this connection. It is commanded by Officer I. Kashuba. The commander, who is generally not a bad one, suffered one failure after another at the beginning of the training year: Either the soldiers of the battalion made mistakes in determining the settings for destruction fire at the battery gun positions, or they spent too much time doing so. As a result some of the fire problems were not completed. Additional training exercises were then organized for the specialists with the active help of battalion chief of staff M. Chekunov, and the training deficiencies were corrected rather quickly.

The commanders pursue two goals in their effort to make the lesson and training conditions as close to those of combat as possible. The first is that the officers must be able to confidently fulfill their responsibilities in the face of so-called interfering factors. The second is that advanced skills must be shared: Officers take the time to watch senior commanders use the simulation resources.

Thus for example conducting fire with projectiles equipped with remote fuses and ricochet fire, the exercise leaders show how electronic smoke-puff charges, the acoustic and visual effects of which are close to those of real explosions, are used for simulation purposes.

Understanding that simulation resources are expensive, the subunit tries to use them as efficiently as possible. For example the officers were shown one day how to organize simulation of ranging fire and destruction fire using one target in such a way that two subunits could undergo fire training simultaneously. One subunit uses a range finder in its fire training, while the other uses bilateral spotting. In this case the actions of the two fire training leaders--for example the battalion commander and chief of staff--are coordinated with each other in relation to time and target location.



Discussing officer training, we cannot forget to mention demonstration fire.

By observing the exemplary actions of an experienced, well trained commander, others are able to assimilate good experience. This is why demonstration fire is believed to be one of the most effective forms of training in the battalion.

Recently Officer O. Borodin was given the task of demonstrating his ability to prepare data and to conduct sighting fire and destruction fire. He completed his task well. Of course, this was the result of meticulous labor and high professionalism. The subunit commander constantly and carefully trained both himself and his subordinates to perform their functional responsibilities, and he prepared everything necessary for fire control--work sheets, calculation tables and so on. Due attention was also turned to providing proper equipment to control officers. The lessons and the work were carried out in full correspondence with the guidelines and the daily routine.

I emphasize this so that readers would not think that special conditions are created for those invited to participate in demonstration fire. They also follow the normal schedule and live the normal life of the subunit. The only difference is that they are paid stricter attention by superiors. It could not be otherwise.

Borodin and his subordinates performed excellently in their task. Soldiers supporting the control process worked efficiently and without interruptions even when the lesson leader made the conditions more complicated, hindered transmission of commands and messages and disturbed the practiced order of actions by simulating certain enemy activities. All those present at the practice range learned many useful things, and the study goal was attained.

Competitions in special training, fire and fire control play a major role in officer training. In such competition the commanders and political workers do more than just supervise. Participating in crews manned entirely by officers, they perform responsibilities of specialists: They work with the guns and instruments, they carry out calculations and so on. Many have distinguished themselves in competitions of this sort--particularly officers V. Berbenev, V. Nichulovskiy, A. Tulyakov and V. Chernikov. And it is quite natural that a subunit having a commander who knows how to perform the responsibilities of his subordinates well is always better prepared.

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## THE SELF-PROPELLED GUNS WENT INTO BATTLE

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 47-48

[Article by Col B. Orlov: "The Self-Propelled Guns Went into Battle"]

[Text] Self-propelled guns are a powerful fire weapon against enemy tanks.

The Great Patriotic War demanded initiation of their production in the shortest time possible. And industry managed to complete this difficult task. The plants quickly worked out the procedures of manufacturing armored vehicles. In most cases they used the chassis of series-produced tanks, on which they installed a gun on a turret mount. The horizontal and vertical traverse of this gun was extremely limited, but it was enough for effective direct fire.

Self-propelled guns turned out to be irreplaceable in highly fluid combat. They could be used together with tanks, infantry and cavalry, as the commanders of combined-armed units and formations quickly learned. In a little while our soldiers learned to use self-propelled guns with the greatest benefit in all forms of combat and in the most diverse kinds of operations.

Efforts to improve the organizational structure of self-propelled artillery proceeded simultaneously with the search for different tactics of its application. The first reserve regiments of the Supreme High Command consisting of four to six batteries were formed in fall 1942. The question of training the appropriate specialists arose. The decision that was made at that time turned out to be the optimum one: creating a training center of the corresponding profile. Personnel were trained and self-propelled gun units were formed at the center, and then fully trained batteries were sent to the front. The soldiers studied in groups. Specialists intended for heavy self-propelled gun regiments trained in one, specialists for medium regiments formed in two groups, and specialists for light self-propelled gun regiments trained in two groups. Driver-mechanics underwent training in two tank training battalions.

But this turned out to be not enough. The operating army demanded an increase in the center's productivity. An artillery unit and a reserve self-propelled

gun unit were sent to it in reply. Three training regiments and a training brigade were formed immediately, sharply increasing the potentials for training different kinds of specialists.

The influx of equipment to the front increased by fall 1943. Once again a shortage of people knowing how to use self-propelled guns in combat was felt. Once again the center had to be strengthened. Two self-propelled gun training brigades were created out of two tank training regiments and a tank training brigade. Ways to intensify the training process were sought in these and in other similar formations and units.

What was the nature of the training? Training lasted 6 months in the self-propelled gun regiments training gun commanders, driver-mechanics, layers and loaders. During this time the specialists were able to learn to act confidently when servicing the vehicles, when preparing them for travel and for fire, and during fire on various kinds of targets.

Then the personnel were transferred to the brigades, where reserve brigades were formed. It took 10-15 days to make them ready for combat. The training center itself was responsible for creating self-propelled gun units. Its highly trained officers were capable of forming and making regiments combat ready in 15-30 days and nights.

Today's commanders and political workers would be especially interested in learning how self-propelled gunners lived, and in what conditions they learned tactics and fire. Life in the training units was hard. This is explained not only by the fact that sometimes there were many shortages, and not so much by that fact, as by the fact that the commanders tried to prepare the personnel for the even harder conditions of a combat situation.

Enlisted men and NCOs slept in quarters and huts adapted for this purpose, in two or three tier bunk beds without sheets and blankets. In the first part of the war the training day lasted 12 hours (10 hours of lessons and 2 hours of self-study). Then after things improved at the front, lesson time was decreased to 7 hours.

Of course the training program was designed in such a way that soldiers would mainly master the knowledge and skills they would need directly for their missions on the battlefield. This is why preference was given to training with the materiel or with simple trainers. Their goal was simple: To get the motor memory to play the decisive role in a crew's actions, so that soldiers could fulfill their responsibilities without error in all conditions, even the most extreme.

No, the commanders and instructors did not try to simplify the training process for the gunners to such a degree that they did not have to think. Even in the difficult wartime conditions the instructors covered theoretical problems, especially in all problems involving fire accuracy.

And now about the classrooms. They could not do without them. After all, some technical training subjects had to be studied more deeply. Future crew and detachment commanders used the classrooms more than other students.

Rifle ranges, tank gunnery ranges allowing for direct fire and for fire from covered positions, tank driving ranges, and special stands and devices for training in certain combat procedures were highly beneficial. Let me emphasize that efficiency experts played a large role in creating the training material base of the center and of the training units and formations. They were the ones who planned and manufactured many of the things that helped to intensify the training process.

And yet, practical field exercises were still the main "universities" of the self-propelled gunners. These exercises went on day and night, in rain and heat, in a situation as close to that of the front as possible. I want to stress this so that today's officers would not devote so much attention to the comfort of personnel when creating their training material base. Soft furniture, polished table tops and parquet floors are a clear anomaly at training centers and practice ranges.

The training of soldiers for self-propelled gun subunits and units always ended in reserve batteries. Tactical and fire coordination of these batteries were achieved in the course of tactical exercises involving field fire.

Situations often arose during the war where the flow of specialists and entire trained subunits to the front had to be sharply increased. In such cases certain fronts created their own tank and self-propelled gun training regiments. Their mission was to ensure a supply of people capable of replacing casualties during major operations.

Officers for self-propelled guns were trained in schools. At first there were only two of them: Kiev No 2 and Rostov Artillery No 2. Another eight reorganized out of tank schools were added to them in 1943. The training time was short--just 6 months. But as soon as it became possible, future officers began training 1 year. For 8 months they acquired the skills and habits that would permit them to confidently perform the responsibilities of any member of a self-propelled gun crew. Then they were taught to command subordinates, to fire the weapons and to control fire. Organization of the training process into two such periods made it possible to end the training program in 8 months when this became extremely necessary.

Thinking about the future, in mid-1944 the command decided to found the Higher Officers Self-Propelled Gun School. Retraining of battery, battalion and regiment commanders and the corresponding chiefs of staffs was started. These people were to play a part in developing self-propelled artillery, and to take an active part in the concluding operations of the war. And it must be said that training institutions of this type played their role in raising the professional level of officers during the time of combat activities and in the postwar era.

Thus life compelled us to seek a system for training commanders and soldiers for self-propelled artillery that would be optimum for those difficult years. And the search was graced with success. Combat experience demonstrates that self-propelled gun subunits, units and formations entering the operating army successfully fulfilled their missions. Most self-propelled gunners

participated with tankmen and infantry in the engagements of the Great Patriotic War, in which their fearlessness, multiplied by military proficiency, brought us victory.

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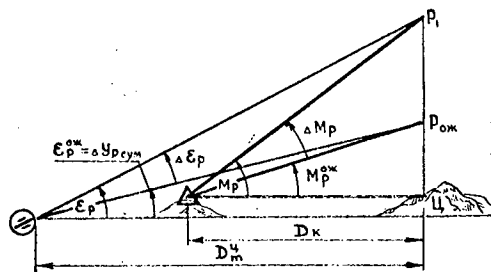
## REDUCING CALCULATION TIME

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 49-50

[Article by Maj Ye. Ablakatov, battalion chief of staff, Transbaykal Military District: "Reducing Calculation Time"]

In our unit we often use an auxiliary table in fire and fire control training to determine the data for ranging fire using ground bursts of projectiles bearing time fuses. We use the table to find the fuse correction ( $\Delta N$ ), the anticipated height of the bursts ( $M_p^{ож}$ ) and the amount by which to correct the fuse setting for the height difference when transferring fire from the check point ( $\Delta N_\epsilon$ ).

In addition we use the table to calculate the height correction used to adjust the altitude at which illuminating shells burst ( $\Delta Y_{p\phi}$ ), and to determine settings for fire using data on a preregistered target when executing a fire mission in the mountains.



The table is based on known formulas, which may be represented in the following form in the case of correcting the altitude of shell burst relative to the anticipated location (see figure):

$$M_p^{ож} = \frac{\epsilon_p^{ож}}{K_y}; \Delta N = \Delta \epsilon_p \cdot \Delta N_{тыс.};$$

$$\Delta \epsilon_p = \epsilon_p - \epsilon_p^{ож};$$

$$\Delta Y_p = -M_p \cdot K_y;$$

$$\Delta Y_{p\phi} = \Delta \epsilon_\phi \cdot K_y;$$

$$\Delta N_\epsilon = \Delta \alpha_\epsilon \cdot \Delta N_{тыс.},$$

where  $\Delta n_{тыс.}$  is the size of the fuse setting change corresponding to a 1 mil change in the angle between the burst locations and the gun position or sight.

$Ky (\Delta N_{\text{ТБС}})$	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1
$\Delta \epsilon_p (\Delta M_p)$										
0-01	—	—	—	—	—	1	1	1	1	1
0-02	—	—	—	1	1	1	1.5	1.5	2	2
0-03	—	—	1	1	1.5	2	2	2.5	3	3
0-04	—	1	1	1.5	2	2.5	3	3	3.5	4
0-05	—	1	1.5	2	2.5	3	3.5	4	4.5	5
0-06	—	1	1.5	2.5	3.0	3.5	4	4.5	5.5	6
0-07	1	1.5	2	3	3.5	4	5	5.5	6	7
0-08	1	1.5	2.5	3	4	5	5.5	6.5	7	8
0-09	1	2	2.5	3.5	4.5	5.5	6.5	7	8	9
0-10	1	2	3	4	5	6	7	8	9	10
0-20	2	4	6	8	10	12	14	16	18	20
0-30	3	6	9	12	15	18	21	24	27	30
0-40	4	8	12	16	20	24	28	32	36	40
0-50	5	10	15	20	25	30	35	40	45	50
0-60	6	12	18	24	30	36	42	48	54	60
0-70	7	14	21	28	35	42	49	56	63	70
0-80	8	16	21	32	40	48	56	64	72	80
0-90	9	18	27	36	45	54	63	72	81	90
1-00	10	20	30	40	50	60	70	80	90	100

It would be suitable to calculate it ahead of time for the required charges and ranges, and to write it down in the range table;

$\Delta \alpha_\epsilon$ --sighting angle correction for angle of sight;

$\Delta M_p, \Delta \epsilon_p, \Delta \epsilon_\phi$ --angles representing how high the shell bursts (the flare stops burning) above the target (above the anticipated burst height).

In this case  $\Delta \epsilon_p$  ( $\Delta \epsilon_\phi$ ) is positive if the bursts are higher than the anticipated height, and negative if lower.

The arguments used for entry into the table are  $\Delta N_{\text{ТБС}}$ ,  $Ky$ ,  $\Delta \epsilon_p$  and  $\Delta M_p$ .

The procedure for determining the correction factors indicated above is demonstrated below with examples.

Example 1: Find  $M_p^{\text{ож}}$ ,  $\Delta N$ ,  $\Delta N_\epsilon$  if the person working on the fire problem has calculated  $\Delta N_{\text{ТБС}}=0.4$  divisions;  $Ky=0.5$ ;  $\Delta \alpha_\epsilon=+0-03$ . The total height correction factor is  $\Delta Y_{p_{\text{СМ}}}=+0-20$ . The angle representing the amount by which the height of the bursts exceeds the anticipated point is  $\Delta M_p=+0-25$ .

Solution: In the table we find  $\Delta Y_{p_{\text{СМ}}}=+0-20$  beneath  $Ky=0.5$ , and in the left column (on the same line) we find  $M_p^{\text{ож}}=+0-40$ .

At first, using  $\Delta M_p = +0-25$  and  $K_y = 0.5$ , we select  $\Delta \epsilon_p = +0-12$  from the table. Then using  $\Delta \epsilon_p = +0-12$  and  $\Delta N_{\text{ТБС}} = 0.4$  divisions, we determine  $\Delta N = +5$  divisions.

Using the values of the arguments  $\Delta \alpha = +0-03$  and  $\Delta N_{\text{ТБС}} = 0.4$  divisions, we select  $\Delta N_{\epsilon} = +1$  division from the table.

Example 2: Find  $\Delta Y_{p\phi}$ ,  $\Delta Y_p$  if the angle representing the amount the point at which the flare stops burning exceeds the anticipated location is  $\Delta \epsilon_{\phi} = +0-45$ ; the height difference between the new target and the registered target is  $\Delta M_p = +0-25$ .

Solution: Using the values  $\Delta \epsilon_{\phi} = +0-45$  and  $K_y = 0.5$ , we select  $\Delta Y_{p\phi} = -0-23$  from the table. Using the height difference between the new target and the registered target  $\Delta M_p = +0-25$  and  $K_y = 0.5$ , we find  $\Delta Y_p = +0-12$  from the table.

The same procedure is used to determine the height correction when ranging targets on steep mountain slopes.

We note in conclusion that this table is convenient and easy to use.

In addition it allows the person working on the fire problem not only to quickly determine the indicated correction factors but also avoid errors that arise when formulas are used to calculate the associated variables.

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## PORTABLE COMBINED MINIATURE FIRING RANGE

Moscow VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 50-51

[Article by Capt A. Tverdokhlebenko, battery commander, Far East Military District: "Portable Combined Miniature Firing Range"]

[Text] Fire and fire control training for gunners requires the use of visual and acoustic effects simulating shell bursts.

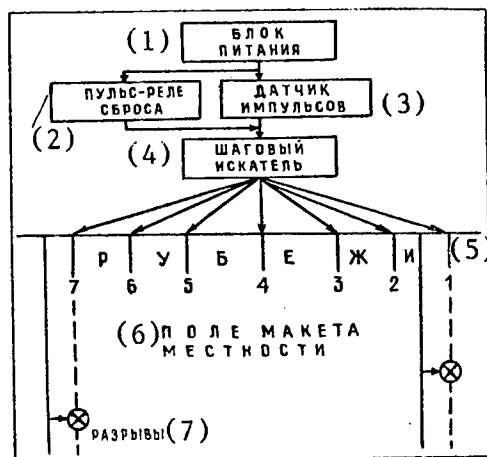
A miniature firing range created in our unit satisfies this requirement: It possesses a system providing for light, acoustic and smoke simulation of targets and bursts. It is also designed in a portable variant. It consists of a firing range and the control console of the officer in charge of firing exercises.

A 4x4 km portion of a map with a scale of 1 cm equal to 20 m is drawn on glued porolon sheets covering a field made from plywood 10 mm thick (a square 200x200 cm sheet). The field frame is mounted on a welded support at a height at which bursts could be observed conveniently. It is covered by two lids that close toward each other. One of them, the back lid, which bears a panorama of the terrain, is locked vertically in working position. The front lid rests on collapsible brackets, and it can be used by the officer in charge of the fire exercise as a table for the control console, a map and other objects needed for the firing exercise.

The electric circuitry of the firing range is easy to manufacture (see figure).

The power block of the firing range (a transformer) supplies 36 V direct current to the winding of the selector switch, and it heats the Nichrome strands of the burst smoke simulators. It also has terminals for supplying 24 V alternating current to the lamps of the burst simulators. These lamps are positioned in the vicinities of the targets in such a way that the bursts appear to come gradually closer to the targets. Lamps belonging to neighboring lines can be used during ranging fire and target destruction. We divided the field of the firing range into six lines. The seventh, which is on the back lid, is intended for exercises involving fire and fire control in the mountains and shells with time fuses. There are 25 lamps on each line. These lamps are secured in holes in the porolon sheet in such a way that the

glass bulbs would be visible. The lamp wiring runs beneath the porolon layer (along the bottom of the field frame).



Key:

- |                               |                        |
|-------------------------------|------------------------|
| 1. Power block                | 5. Lines               |
| 2. Clearing relay-interrupter | 6. Terrain model field |
| 3. Pulser                     | 7. Bursts              |
| 4. Selector switch            |                        |

The lamps turn on when their serial number (from 1 to 25) is dialed by the pulser--a telephone dial on the control console of the officer in charge of the firing exercise.

Thus there are 25 lamps connecting to the selector switch in one row, and there are eight rows. A bus on the eighth row makes up the operating circuit of the relay-interrupter, and it is used to return the brushes of the selector switch to their zero position. A lamp installed for convenience in the upper corner of the panorama indicates that the selector switch is in its zero position. The selector switch (an ShI-25/8 can be used) and the burst sound simulator are secured beneath the frame of the firing range field. We manufactured the sound simulator from a door chime. The spring-loaded electromagnetic core of the door chime simulates the sound of a burst when it strikes the plywood housing. The electric circuit contains diodes carrying current up to 10 A (D343, 250, Ø40D), 50 microfarad x 50 volt capacitors, pushbuttons and tumbler switches, and wiring of various designs and brands.

Smoke simulators were included in the electric circuit to represent firing enemy batteries (and the bursts of friendly shells).

The simulators consist of a ceramic tube (insulators from motor vehicle sparkplugs were used), into which we inserted a Nichrome coil, securing it to a noncombustible plastic base glued to the bottom. A small amount of rosin was poured into the tube. When the tumbler switch on the console controlling the smoke simulator is turned on, the coil heats up instantaneously, and a jet of smoke emerges from the tube.

It should be noted that the miniature firing range can also be used to time the target ranging process using a stopwatch. In this case the stopwatch is turned on when the lamp flashes, and it is turned off at the sound of the burst simulator.

Illumination is provided during the process of ranging fire and fire correction in the course of destruction fire as follows: A parachute is drawn on the panorama. A motor vehicle lamp (24 V) is installed at the base of the parachute to represent a flare. This lamp turns on when the "Flare" button is pressed on the control console. It illuminates the terrain for a preset time interval.

The officer in charge of the firing exercise controls the electric circuitry of the firing range from a console on the table top. The console bears the following hardware: A power switch with an indicator lamp, a pulser, seven line tumbler switches, a "Clear" button that sets the brushes of the selector switch at their zero position, a "Fire" button that controls the burst sound simulator, a "Burst" button controlling the burst flash simulator, a burst control lamp, five tumbler switches for the burst smoke simulators, and a "Flare" button that simulates an illuminating shell and turns off by itself.

We connected the control console to the selector switch and other apparatus mounted on the firing range frame by means of two 10-strand cables.

Thus our electric circuit can be used at battalion scale for all problems of the artillery training course. The person working on the fire problem can develop and improve his habits of estimating deviations of the bursts from the target in range and bearing, of making decisions to strike the most important targets with a consideration for the situation, and of selecting the appropriate resources for fire, for ranging fire and for destruction fire.

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CSO: 1801/79

## INTEGRATED TRAINING ON A SPECIALIZED TACTICAL COURSE

Moscow VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 53-55

[Article by Lt Col V. Timokhin: "Integrated Training on a Specialized Tactical Course"]

[Text] Integrated training in which interrelated study problems pertaining to different training subjects are worked on successively occupies a special place in the general system for training antiaircraft artillery subunits in the Belorussian Military District. For a long time fire training was perhaps the only exception. For objective reasons the personnel could not fire their guns at their permanent deployment locations.

Things changed fundamentally after the district worked out fire problems for antiaircraft artillery subunits using piggyback barrels attached to the main guns, and the conditions for solving the problems and for scoring the results. Together with specialized tactical courses created in some training centers, this made it possible to improve the fire skills of the personnel more intensively.

Instructiveness and effectiveness are achieved in such training because the antiaircraft gunners work in a highly fluid situation that is made as similar to that of real combat as possible. Traveling over rough terrain, they surmount various obstacles, conduct reconnaissance, annihilate targets in the air and on the ground, and implement measures to protect themselves against mass destruction weapons. Battery, platoon and gun commanders learn to control the maneuvers and fire of their subunits, to competently estimate the situation and to assign tasks to subordinates in accordance with the former on a tactical background.

In my opinion there is one other important feature of this form of training. Because all personnel experience the same ground and air situation, and because there are numerous complex obstacles that the personnel must surmount on real terrain a spirit of rivalry is imparted to the integrated training, in which practically all soldiers of a subunit participate. This also makes it possible to organize competition in relation to specific tasks and standards. At the same time to avoid stereotypy in the actions of the students, the target situation and the sequence and procedures of surmounting obstacles are periodically changed.

The district's experience in conducting integrated training on a specialized tactical course shows that it would be suitable to include such training into the combat training plans of the units. It can be fitted into the schedule together with tactical exercises, test exercises and qualification firing, or into training exercises before the latter.

The study problems and objectives are also changed in correspondence with this. For example at permanent deployment locations it would be suitable to begin the training by working on elements of the combat readiness of the subunits, and to check how well the personnel prepare the equipment for travel and how well they perform such travel to the training center. This stage can also be carried out in the form of a battle drill exercise. Then in the field, during exercises and training sessions, there would be no need for all of this.

Going on, in order that the training would proceed at a high level, the degree of coordination of the subunits must be taken into account. This is precisely why we recommend conducting fire training with piggyback barrels successively using all types of guns beginning with the last third of the first month of each training period. The exercises are then carried out with an entire platoon beginning in the last third of the second month. Only after that do the soldiers train as entire batteries.

The instructiveness of the training depends in many ways on the actions of the control and simulation group, which must include--besides the required number of NCOs and enlisted men--the regiment chiefs of reconnaissance, communication, chemical and motor vehicle services. They not only monitor and evaluate the actions of the personnel, but they also help the battery commander. They make it especially certain in this case that safety measures are observed in accordance with the requirements of the directive documents and instructions of the training centers.

As an example I would like to discuss integrated training in the subject "Actions of a Battery Covering a Tank Battalion in the Offensive," conducted on a specialized tactical course by Captain V. Smolyaninov's battery.

The day before the training the battery officers were made aware of the initial situation, which they plotted on working maps. Four guns were prepared for fire from DShK machinegun barrels secured to them. Ammunition was obtained for five or six training tasks (against helicopters, diving and low-flying targets, moving APCs and an airborne assault force).

At 0550 hours the personnel began the exercise in response to an assembly signal. After checking the armament and equipment the lesson leader announced the study subject and objectives to the personnel and once again recalled the need for observing safety measures.

After this, Captain Smolyaninov received his mission from him. While he was drawing up his plan and preparing the operation order, the NCOs and enlisted men worked on tactical training standards pertaining to actions with the vehicles under the guidance of the platoon commanders.

En route to the specialized tactical course the platoons worked on the motor vehicle training standard "Driving in a Column." And although there was an abundance of upgrades, downgrades and turns along the route, and the vehicles had to travel at high speed, the drivers demonstrated good skills. Observers aboard the vehicles conducted reconnaissance in the indicated directions, and they transmitted control signals promptly and accurately.

On reaching the first firing point the battery commander received a signal telling him that "enemy" combat helicopters were approaching. The battery began assuming its combat formation on the move. A certain amount of time later (foreseen by the standard for a "good" grade) two targets appeared above the forest. The gun crews opened fire. NCOs and enlisted men not directly involved in the fighting fired dummy rounds at the targets from their assault rifles.

Then the battery resumed its journey. The antiaircraft gunners surmounted a marshy area over flexible wheel treadways, which had to be reinforced by makeshift resources in a number of places. The column stopped before a deep but narrow ditch.

Following the orders of platoon commander Senior Lieutenant Yu. Semykin, four soldiers removed metal ramps from the first two vehicles towing guns and laid them across the obstacle. After checking the dependability of the resulting track bridge Captain Smolyaninov gave the order to resume travel. The ramps, which were so helpful in keeping the vehicles moving, were then loaded by the crews of the last two guns on their vehicles.

As soon as the column surmounted the trench it was "struck" by another two helicopters. Once again the battery successfully repelled the strike. Gun crews led by junior sergeants R. Graladze and L. Sinko distinguished themselves.

In the next portion of the route Sergeant A. Zelikman's subordinates had to clear a path through a minefield by hand. The vehicles then made their way across slowly, with increased distance between them, through the marked passageway. Each driver knew that if he was even slightly careless, the lesson leader's assistant would label his equipment out of commission, which would affect fulfillment of the training tasks.

The battery crossed a wooden track bridge prepared across a stream earlier without delay. But soon after, it was attacked by "enemy" ground-assault aircraft. The antiaircraft gunners fired on the diving IVTs [not further identified] targets during a short halt.

Then back on the road. Once again the gun crews came to the assistance of the drivers: The column had to surmount a zone of unmined antitank obstacles. The next obstacle was a contaminated zone. The personnel wore protective clothing to the end of the training on the specialized tactical course. During this time they still had to evaluate the passability of a bridge and a ford across a river, cross it by a method selected by the commander, fight two APCs advancing on the fire point, and operate in a complex aerial situation. It was

only after this that they could undergo partial special cleansing to remove simulated radioactive contaminants.

The aerial situation was most instructive from the point of view of combat operations at the end of the course. The fire position was occupied and organized here after a preparatory halt during which the antiaircraft gunners selected locations for the different elements of the combat formation. In this case practically all personnel fulfilled individual and group standards associated with preparing equipment for fire.

After the RPK [radar instrumentation complex] detected an airplane towing a PMZh target, targets simulating an attack by a ground-attack airplane diving at the battery and the landing of an airborne force were released from an estimated range. The gun crews opened fire on them, strictly observing safety measures.

A ground simulator was used to represent the assault force in the training center, and a 40-millimeter parachuteless long-range flare simulated the diving target.

The field exercise was hard but instructive for the battery officers, NCOs and enlisted men. Many of them did not even notice how quickly the time flew by. It was not until the all clear signal that they became aware that the training had come to an end.

The training was critiqued back at camp after the equipment was serviced. First the lesson leader turned the floor over to each regiment service chief that helped him with the training. Then the battery commander analyzed the actions of the platoons and crews, naming the best and those that made mistakes. The lesson leader then summarized the final results. He also announced the scores for the fire training and for work on the combat standards.

#### Study Problems and Plan of the Second Stage of Training

##### 1. Travel of the Batteries to the Specialized Tactical Course

When instructed to do so by the lesson leader, the battery commander gives the commands "To your vehicles" and "Mount."

Fulfilling these commands, the personnel perform their tactical training standards.

The battery commander communicates with the tail-end vehicle and then reports to the lesson leader that the battery is ready to move out. On receiving permission, he commands: "Start engines" and then "Forward."

All vehicles begin moving simultaneously.

Elements of the standard for driving in a column are performed en route.

## 2. Battery Sighting Fire at Combat Helicopters

When the battery reaches the first fire point the battery commander receives a radio signal that "enemy" helicopters are approaching and commands: "All vehicles turn right (left)."

Observers repeat the command, and the drivers perform it. When the tractor-trailer units and trucks get to the fire point the battery commander commands: "Halt," "Prepare for battle."

The crews of the antiaircraft artillery platoons perform the standards of assuming fire positions from travel position and deploying in combat formation with the guns prepared for sighting fire, while personnel of the control platoon perform the standards of deploying (packing up) the commander's zenith telescope, setting up (breaking down and packing away) the aiming circles and positioning reference points at the combat monitoring point.

The lesson leader gives the signal to raise two "Helicopter" targets.

Discovering the aerial "enemy," the observer notifies the personnel by voice and signal flare.

The battery commander gives the order to open fire.

Platoon and gun commanders determine and designate the firing data. When ready, they command: "Fire." Estimating the deviation of the tracers from the targets, they calculate the corrections.

The gun crews fire at the helicopter targets, performing combat standards.

After the firing exercise the battery commander gives orders to leave the position.

The personnel perform the standards of packing up and leaving the fire position.

## 3. Advancing to the Enemy's Forward Edge of Defense. Protecting Troops from Strikes by Combat Helicopters

When the battery approaches a marshy area along the route, the battery commander gives the command to increase the distance between vehicles.

The observers repeat the command by signals. After the distance between the vehicles is increased, the column resumes travel. When necessary, platoon and crew commanders supervise soldiers who reinforce the road bed with brushwood or fascines.

After surmounting the obstacle the battery commander gives the command: "Reduce interval." He stops the column in front of the ditch and orders the commander of the 1st Antiaircraft Artillery Platoon to set up a track bridge.



The platoon commander supervises the NCOs and enlisted men as they lay metal ramps.

After the battery commander checks the quality of the bridge, the column resumes travel.

At the second fire position the battery commander gives the signal to deploy the battery into a line of guns, and when targets appear, he gives the order to fire.

During deployment into combat formation and during fire, the personnel perform the standards of tactical and fire training.

#### 4. Moving to a New Fire Position. Repelling an Attack by an Airborne Enemy at a Short Halt

At the forward edge of the minefield the battery commander halts the column and orders the commander of the detachment prepared to reconnoiter mine obstacles to create a passage through it.

The battery personnel dismount and take cover. The crew of the on-call gun prepares for fire. Attached combat engineers use a mine-clearing outfit to manually create and mark the passage.

After increasing the distance between vehicles, the column begins to move in response to a signal from the battery commander.

After the battery crosses the track bridge and reaches the third fire line, the battle effects group launches a rocket to simulate an attack by an enemy ground-attack aircraft.

The battery commander gives signals to assume combat formation in a line of guns and then to open fire.

Responding to these signals, the personnel perform the standards of tactical and fire training.

After the firing exercise the battery resumes travel.

#### 5. Surmounting a Contaminated Zone and a Water Obstacle. Firing at Moving Ground Targets

The battery commander halts the column at the boundary of the contaminated zone and gives orders to cross it.

The personnel perform the necessary operations with their equipment a platoon at a time. They use protective resources and perform the standards of protection against mass destruction weapons.

The crew of the on-call gun, which is designated out of the 1st Platoon, and then out of the 2d Platoon when it is ready, covers the battery.

At the commander's command the battery begins moving, prepared to conduct a fire operation at a short halt in protective resources. The distance between the trucks and tractor-trailer units and their speed are increased. All forms of reconnaissance are carried out.

The column halts when it encounters a water obstacle along the route.

Having selected a ford, the detachment of attached combat engineers first determines if there are any minefields there. Then it determines the width and depth of the river, its rate of flow and the nature of the banks and bottom.

An RPK squad reconnoiters the bridge. After establishing the condition of the bridge and the approaches to it, the NCOs and enlisted men measure its various elements. Then they determine its loading capacity from tables.

The crew of the on-call gun makes ready to open fire immediately.

The battery commander uses the obtained data to select the crossing procedure, and he organizes it.

At the ground target firing line the lesson leader informs the battery commander that up to a platoon of "enemy" troops is advancing on the column, and after a certain time he gives the command to display two approaching APC targets.

The battery occupies its position and opens fire at a range of 1,000 meters.

The platoon and gun commanders determine the corrections and supervise the work of their subordinates.

Persons not involved in the fighting fire their assault rifles.

After repelling the attack of the ground "enemy" the battery resumes travel.

## 6. Actions of the Battery in a Complex Aerial Situation

The battery halts in the vicinity of the fifth fire position. Together with the platoon and gun commanders the battery commander selects the locations for the elements of the combat formation. He then gives the command to occupy the fire position.

The personnel perform the standards of occupying a fire position and deploying a battery, preparing the equipment for fire with RPK assistance.

The battery commander gives orders to repel an attack by an airborne enemy and draws up the battle documents.

As soon as an airplane detected by the radar instrumentation complex gets to a certain range, the battle effects group launches targets simulating a diving aircraft and an airborne assault force in such a way that the battery could open fire on all targets at the same time.

The battery and platoon commanders supervise the actions of the personnel in the complex aerial situation.

After repelling the "enemy" strike the battery packs up and moves to an indicated area where the personnel undergo partial special cleansing.

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CSO: 1801/79

## WHO WILL BE SELECTED AS AN OPERATOR?

MOSCOW VOYENNIY VESTNIK in Russian No 10, Oct 86 pp 56-57

[Article by Col Yu. Belousov, candidate of psychological sciences, docent:  
"Who Will Be Selected As An Operator?"]

[Text] All models of armament and all technical devices are designed for the "average" person. This means that we must determine whether or not a novice is capable of successfully mastering a military specialty--that is, we must conduct occupational selection.

Hence follow the troubles so well known to many commanders, which arise when young soldiers appear in the subunit: Who is to be appointed to what position? Many difficulties appear in relation to operators in view of the objectively existing special position of these specialists in the air defense troops.

One good thing is that candidates pick up their initial knowledge and habits in training subunits. Then when it comes time to appoint them to positions we can consider the grades they received on their final exams.

This approach is acceptable in general, though in practice, predictions based only on the individual's level of occupational training are successful in around 70-80 percent of the cases. After all, when the individual goes from study to day-to-day practical work (in the most diverse conditions), the motives of this behavior, which are what regulate his activities, change. And then, what are battery (company) and battalion commanders to do if there are no graduates of training subunits among the novices?

As we know, individual properties are what characterize the soldier the fullest. All together they make up the structure of the personality, and they have come to be called personal qualities (there are around 200 of them in all). The future activity of an individual in any possible situation can be predicted with sufficient reliability on the basis of any one of these qualities and on the basis of all of them together. Of course the procedure itself of such prediction is extremely complex, though the appropriate procedures and tests for psychophysiological selection have been developed.

In order to make it easier for commanders to do this job when selecting operators, 10 basic parameters, called grading parameters, have been selected from among all of the personal qualities. These are sensation, perception, memory, thinking, attention, volition, feelings, work of the locomotor apparatus, type of higher nervous activity and occupational preparedness.

Other methods of selecting operators on the basis of personal qualities have been tried out as well. But all of them are rather cumbersome, and they are not fully suited to the day-to-day life of the troops.

Later research showed that the job can be made easier by grading the suitability of a soldier on the basis of the presence or absence of properties which characterize his performance, his work. For this it would be sufficient to reveal whether or not he performs operations accurately, quickly (promptly) and reliably. These have come to be called operator qualities. That is, while in the first group of procedures each candidate for a position is evaluated comprehensively from the standpoint of his suitability for operator activity in general, in this procedure a certain model of armament is selected, the qualities that a crewmember servicing it must possess are determined, and then the presence of or absence of these qualities in a given soldier is revealed.

This approach is quite valid because these indicators are integral (cumulative) in nature in relation to personal and, consequently, to grading qualities.

Take accuracy as an example. It can be expressed by way of mistakes--omission of an action, fulfillment of an unrequired operation, inaccurate fulfillment of a required operation, deviation. In this case each of these types of mistakes characterizes both the actions of the soldier and his personality properties that are necessary to operator activity. Thus in order to work accurately, the individual must be punctual, he must have good sensation, perception, memory and thinking, he must have the ability to make decisions and so on. Promptness includes properties such as a sense of time, reaction speed, self-control, work of the locomotor apparatus and a number of others. The reliability of an operator's labor is associated with his ability to maintain performance for a long time and under various conditions.

Something called the problem method has been proposed as a means of revealing operator qualities. It essentially requires the candidate to carry out several exercises (solve several miniproblems) typical of the given work station. It would not be difficult for an officer who is himself proficient in the combat use of the equipment to prepare such problems.

In this case it would be desirable to do the following. First of all, write a detailed list of the actions of an operator at the work station. Second, select from among them those that are most typical and those that are hard to assimilate. Third, write out a verbal assignment to perform these actions. It is important in this case to consider the conditions of the future work and the soldier's anthropometric data--his height, weight, strength and mobility. The exercise should be presented in text form because a person thinks in

words. If a commander demonstrates the actions and then tells the candidate to repeat them, this could reveal only the candidate's capability for repeating movements, and not his ability to act thoughtfully, with self-control. Consequently the problem of selection would be solved only partially in the best case, and falsely in relation to the quality under analysis in the worst case. Fourth, designate the place where selection is to occur: with real equipment or with a trainer. The choice depends on safety considerations, though of course it would be desirable to test at least some of the actions using organic apparatus in real working conditions. Fifth and finally, the actions of the candidate must be graded, and his suitability must be determined.

For example the capability a candidate has for performing the following actions would obviously have to be tested when selecting a compressor plant operator: shutting a valve with the left hand while simultaneously opening another with the right; working with a sense of time; taking readings from a pointer-type instrument; connecting and disconnecting hoses.

Radar station operators must know how to do other tasks: promptly detecting and reacting to a trace moving on a screen; distributing attention among different instruments on a control console; understanding that as the angle of sight of the optical reconnaissance resource increases, the image will drop lower on the screen, and acting in correspondence with this phenomenon.

What is most important in selection is to see whether or not the candidate possesses the instincts required for the given type of work.

Experiments have shown that testing of the performance of even elementary actions by operators is qualitatively not inferior to determining their suitability on the basis of grading parameters. If it becomes necessary to move a soldier to another position in the crew, selection is repeated. This is perhaps the main shortcoming of this method. Nonetheless, in troop units (where the experiments were carried out), when a subunit receives only a few persons as replacements, it would be most efficient to select them on the basis of operator qualities.

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CSO: 1801/79

## KNOWING HOW TO FIGHT ANTITANK WEAPONS

MOSCOW VOYENNNY VESTNIK in Russian No 10, Oct 86 pp 58-60

[Article by Maj Gen E. Grebenshchikov, Lt Col M. Gavrilov: "Knowing How to Fight Antitank Weapons"]

[Text] As the experience of the Great Patriotic War shows, timely destruction of the enemy's antitank weapons in many ways promotes successful fulfillment of missions. The rate of advance of the subunits rises, and the stability and aggressiveness of defense increase.

Antitank weapons are developing intensively and improving continuously today, making it extremely necessary to carefully study the ways to fight them.

In many units and subunits, and particularly in those in which Lieutenant Colonel O. Fedorov, Major A. Koshonov and captains I. Chudinov and O. Kurgosov serve, the personnel diligently learned to fight antitank weapons in all forms of combat. Such units and subunits begin by training the officers themselves.

It is believed here that there are great possibilities available for teaching commanders and staffs to fight enemy antitank weapons. What is important is simply to utilize these possibilities correctly. For example commander training lessons (in which training films are shown), demonstration exercises, instructor training exercises, short tactical exercises and group field exercises can be used productively. It is precisely in such training that officers thoroughly study the combat potentials of antitank armament, and the organization and tactics of subunits of the probable enemy. And the depth to which the basic principles of combat use of antitank weapons is reflected in special figures and diagrams depends on the category of the students. The examples below demonstrate this approach.

Once the officers were undergoing training (a group exercise) where one of the study problems (in reconnaissance training) was to determine the organization of enemy antitank defenses. Lieutenant Colonel O. Fedorov and the students thoroughly analyzed the principles of the formation and disposition of antitank weapons on the terrain. Fedorov focused the attention of the officers on the strong and weak sides of the defenses.

Then he questioned several officers on the procedure for annihilating the antitank weapons. He summarized the discussion on this problem and demonstrated (with diagrams and with a terrain model) the most effective way to use available weapons in the evolved situation, and the way to organize close and, most importantly, constant coordination and control of maneuver and fire in combat.

Here is one more positive feature. When he conducts group exercises and short tactical exercises, Lieutenant Colonel Fedorov always tries to make the initial situation one in which students who estimate the composition and position of the "enemy" incorrectly and who make stereotypic decisions on how to destroy antitank weapons are unable to solve the problem successfully. This form of training doubtlessly develops the thoughtfulness of the officers, and their ability to predict the course of combat. Control resources are widely used in such training, and scenario inputs are made with technical resources, rather than orally by the lesson leader.

Battalion commander Major A. Koshonov organizes training for subunit officers competently and thoughtfully. He devotes serious attention to problems concerned with fighting antitank weapons in close combat when attacking the forward edge of defense, and to detecting and annihilating them deep within strongpoints. His main objective is to teach officers at company level to estimate the situation quickly and correctly, to make the most suitable decision and to assign clear missions to subordinates to destroy fire weapons.

The training conducted by Major Koshonov is interesting and instructive. He always creates a complex and fluid situation. He begins by listening to the decisions made by several students on how to annihilate detected antitank weapons. Rather than stating any conclusions on their decisions, he allows the officers to carry out their fire tasks, during which the possible results of their actions are revealed in a concrete combat situation. Various methods of determining the probability of annihilating each type of target and the general degree of destruction suffered by the opposing sides are employed for this purpose. Then the students carry out mathematical calculations, and Major Koshonov listens to their conclusions and their decisions for subsequent actions. In this way he reveals the basic principles upon which organization of the fight against antitank resources is based and teaches the officers to correctly select weapons and methods of fire and to assign fire tasks to subordinates.

These units and subunits attach important significance to material support to training and exercises. A rather large number of mock-ups and of snap and moving antitank weapon targets capable of simulated fire are positioned at different ranges on the tactical fields, in the artillery training schools and at the troop firing ranges. In situations characterized by concrete conditions, the officers improve their habits of observing the battlefield, of reconnoitering targets and of accurately determining basic fire data.

The lesson leaders create different situations typical of platoon and company combat. The decisions and practical actions of the students are meticulously analyzed and compared. Special attention is turned to temporal indicators and



to the effectiveness of antitank weapon destruction. The grade is lowered for any mistakes, even small ones. This forces all commanders to thoughtfully organize the subunit's combat formation, reconnoiter and evaluate the "enemy" and organize destruction of his antitank weapons by fire.

We should note that the officers successfully work out the problems of controlling the fire of their subunits during infantry (tank and infantry) training exercises. The platoon and company commanders learn (and simultaneously teach their subordinates) how to make decisions to annihilate dangerous targets and correct fire on a particular tactical background. Thus officers and NCOs of the companies led by Captain G. Dadamatov and senior lieutenants O. Popov and V. Yermolayev demonstrated excellent skills during test exercises on organization of the destruction of antitank weapons.

Joint training exercises in which combined-arms commanders participate with gunnery and antiaircraft officers produce good results. In these exercises they learn how to destroy the "enemy" by fire, including his antitank weapons.

Acquired knowledge and habits are improved in the course of various tactical exercises.

The reason that motorized riflemen, tankmen, gunners and other specialists must be carefully trained to do effective battle against antitank weapons is that they are the ones that do the actual fighting.

In order that the personnel could develop firm practical habits, they first undergo theoretical training in the classroom. They study the technical specifications of the weapons, their typical identifying characteristics, the principles of their application in combat and their possible disposition with regard for terrain conditions and for natural camouflage and concealment. What is most important here is to teach the soldiers to quickly detect and identify antitank weapons on the battlefield, and to know the range at which fire on advancing armored vehicles (tanks, IFVs, APCs, self-propelled howitzers) would be effective.

Besides planned training, subunit commanders periodically go over these problems with the personnel during self-study hours as well as at infantry (tank and infantry), battle drill and tactical exercises.

As an example in some tank and infantry exercises, company commander Captain V. Nikolayev organizes a training station where tankmen learn to detect and annihilate antitank weapons. Several antitank weapon targets, including a helicopter, are positioned in the field. The main objective of such training is to teach to the personnel to detect antitank weapons, to determine their importance and fire priority, and to accurately prepare the basic data for their annihilation with the first shot.

Here is an example of a specific training problem. Two targets appeared simultaneously--an antitank rocket launcher and a recoilless gun. The crews detected them quickly. The command to open fire was given. But at this moment a new target--a helicopter--appeared a little off to the side. Platoon commander Lieutenant G. Smorodinov kept careful records on when the crews

detected the more-dangerous target, when and how the commands to transfer and open fire were given, and whether or not an antiaircraft machinegun was prepared for fire. After this he critiqued the actions of the tankmen. A little while later another variant of the problem is created.

All fire tasks are different, and therefore crewmembers must maintain constant observation, and they must quickly measure the range to targets, estimate the situation and give new target data and commands. Thus the tankmen develop quick reaction and psychological stability.

In another unit the company commanders competently train their subordinates to fire at antitank weapons at maximum range, including by concentrated fire.

Senior Lieutenant Yermolayev, commander of a motorized rifle company, uses this procedure when studying this problem: He plans the fire problems concerned with annihilating antitank weapons in such a way that all platoon resources would be operating simultaneously at the end of a rifle training exercise. As the subunits undergo fire control training the officer teaches the IFV crews, riflemen, machine gunners and grenade throwers how to coordinate their actions.

Note that both commanders attach special significance to painting (camouflaging) the targets and simulating their fire--that is, they try to make the situation resemble real combat as closely as possible. In our opinion this also has a good psychological impact on the training of gunners. These officers also devote serious attention to teaching their subordinates to fire accurately at low-flying targets--helicopters equipped with antitank guided rockets.

Take the motorized rifle battalion commanded by Captain Chudinov as an example. Scouting displays tastefully and thoughtfully created in the companies and exchange and dissemination of the experience of the best gunners in the subunits have played a significant role in NCO training. The practice of training the soldiers with regard for their combat specialties has proven itself well. For example exercises with snipers, machine gunners, grenade throwers and gunner-operators are conducted at a high level by the most experienced and best-trained officers. The battalion commander personally conducts some of the training.

As we know, tactical exercises involving field firing are the concluding stage of antitank training of the personnel of motorized rifle, tank and artillery subunits. In these exercises the crews have the possibility for reinforcing their habits of solving fire problems in conditions as close to those of combat as possible. And the subunit commanders are able to actually control fire with the purpose of annihilating various weapons of the opposing side, and they improve their habits of organizing and maintaining close coordination with neighboring units and with attached and supporting subunits.

Special instruction pamphlets--like those that were given to our soldiers during the Great Patriotic War on how to fight fascist tanks--provide significant assistance to teaching the personnel to fight the enemy's antitank weapons.

Reading these instruction pamphlets, enlisted men and NCOs can once again recall the most typical identifying characteristics of antitank weapons, their possible locations in the defenses, and their effective range. The pamphlets indicate the areas of the terrain to which special attention should be turned when observing the battlefield so as to be able to promptly detect antitank weapons, which weapons should be used to annihilate them, what methods of target indication should be used, what kinds of commands should be given and so on.

It should be said in conclusion that only a thoughtful and integrated approach to teaching personnel to fight antitank weapons will raise the fighting efficiency of the subunit. And this is precisely how training is organized in the subunits indicated above. Their commanders devote a great deal of time and effort to seeing that their subordinates would know how to fulfill an urgent requirement of modern times--destroying all targets with the first shot, with the first round.

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CSO: 1801/79

## FIRE TRAINING FOR AMERICAN INFANTRY

Moscow VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 61-62

[Article by Lt Col A. Alistratov, Capt F. Grigoryev: "Fire Training for American Military"]

[Text] American imperialism, which has assumed the road of an unrestrainable arms race, has recently increased its aggressiveness sharply. In its militaristic preparations the command of the U.S. Armed Forces attaches important significance to thorough preparation of the ground troops for combat activities in any region of the world. In this connection new, effective programs for training specialists and subunits are being developed, existing ones are being constantly improved, and various training resources are widely utilized.

Thus the following have been created to improve fire training for infantry: an infantry remote target control system (IRETS), a laser device for weapon and sniper training (MAGLAD) and a combined infantry fire training system (MILES).

These systems are designed in such a way that they not only teach the soldiers what they must know, and know how to do, for successful combat in modern conditions, but they also prevent acquisition of the wrong habits of using the weapons.

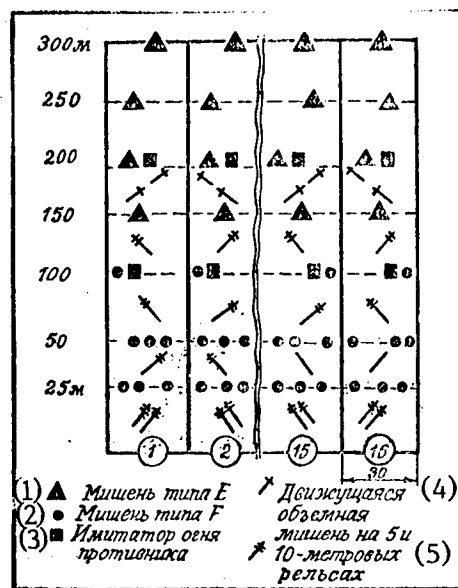
Let us briefly examine the purpose and general layout of these systems.

The IRETS system was developed with the purpose of making the situation in which infantrymen train as close to one of real combat as possible. Programmed remotely controlled target complexes simulating the actions of an enemy detachment on the offensive were created for this purpose.

It has been noted that this system is the most complex of any that have ever been created for American ground troops. But in the opinion of a number of specialists its cost is fully acceptable. It includes four target ranges: modified, defensive maneuver, defensive control and group. And although the components of the equipment are interchangeable, a decision was made to create the defensive control range first, since it was the most complex.

A portable target range has now been developed as a supplement to it. It is equipped with 40 radio-controlled moving or nonmoving targets and 16 fire

sectors occupying an area of 30x300 m (see the figure for one variant). Type F ("chest figure") and type E (waist figure) snap targets and seven moving three-dimensional "running soldier" targets are installed in each of them at ranges of 200 m and lower.



Key:

- |                         |   |
|-------------------------|---|
| 1. Type E figure        | 4. Moving three-dimensional target on 5-meter rails |
| 2. Type F figure        | 5. On 10-meter rails                                |
| 3. Enemy fire simulator |   |

The "battle" (solution of fire problems using live rounds) begins when enemy motorized riflemen dismount from their armored personnel carriers (APCs) 300 m from the limit of opening fire. For 3 minutes each student shoots his organic weapon at 32 targets at long and moderate range. Beginning at 125-100 m the next operating cycle of the system, which lasts 2 minutes, is turned on. Seventeen targets appear during this time.

Each student is issued 60 rounds for all of the fire problems. He must use them to hit 49 targets in 5 minutes. The targets appear (move) two or three times--that is, the shooter has an average of 6 seconds to detect and annihilate one target.

All of these targets may appear, drop and move in both directions at three speeds (1.8, 2.7 or 3.7 m/sec--that is, around 6.5, 10 or 15.5 km/hr) at six lines. Three-dimensional targets simulating runs by attacking (retreating) infantrymen move on rails 5 m long at the two distant lines, and on rails 10 m long at the other lines.

The target situation is controlled from a tower (control post) by a special digital computer. Signals are transmitted to the targets via underground cables. The computer can simultaneously control 512 targets and receive

information on target hits. In addition a portable variant in which the targets are controlled by radio has been developed.

It has been reported that several different programs (variants) developed with regard for the tactics used by subunits of Warsaw Pact countries can be fed into the target situation control console. The exercise programs are stored on magnetic tape. The operator inserts the needed cassette into the computer as instructed by the lesson leader. The computer memory can then control any repetitions of the exercise.

The system can work in automatic, semiautomatic and manual modes. In the last case the officer (the sector chief) controls the appearance of all targets. Fire simulators enhance the impression of a combat situation. The computer records the firing results of each student.

Three-dimensional targets are made from self-healing superhigh-density polyethylene, and they are capable of withstanding up to 2,000 hits. Each of them is equipped with a hit sensor that transmits digital data to a display on the console.

The sensors are rather complex instruments. They can only detect hits by 5.56 and 7.62 mm bullets at a rate of fire of up to 1,200 shots per minute, 12.7 and 20 mm bullets at a rate of up to 650 shots per minute, and 25 mm bullets at up to 300 shots per minute. They do not react to ricochets or grazes, or to shocks created by powder gases, rocks and earth: They pick up direct hits only.

In 1982 the IRETS system was updated somewhat and named the RETS. It contains armored targets moving at 10, 20, 30 and 40 km/hr. It is used for joint training of infantry and tank subunits.

In it, a computer can also be used to program the number of hits necessary to destroy a given target (depending on the vulnerability of the enemy's fire weapon).

A sensor mounted on each target transmits a "hit" signal to the computer. The latter keeps the target up or lowers it in accordance with the program. In the opinion of foreign specialists this creates a more realistic pattern of "combat." After all, enemy soldiers can continue to return fire after being wounded once or twice. Moreover, sometimes not less than two hits are required to destroy some armored targets.

In the MAGLAD system (a low-power laser device for rifle and sniper training), a laser beam and a laser sensor are used in place of live ammunition. The laser device is mounted on the barrel of an M16 rifle, in front of the foresight. The weapon is "fired" at targets on a miniature firing range or on the terrain at a scale of 1:12. Thirty-five targets are installed on five lines (from 4 to 25 m) corresponding to actual distances of 50-300 m in the sector of each rifleman.

The MILES system also consists of a laser device mounted on the weapon barrel, and a laser detector. The latter is secured to combat equipment, to armament

and even to the soldiers themselves. In the opinion of foreign military specialists this corresponds directly to a real "combat situation," because subunits actually fight each other. The instrument produces a low-power laser beam that is safe to the human eye. Dummy rounds are used in this case to simulate fire from infantry weapons, and fire, smoke and sound simulators are used in antitank guided rocket launchers and tank guns.

The MILES system consists of the following components: laser simulating equipment for different weapons (M16A1 rifles, M60, M2HB and M85 machineguns, Whiner, Dragon and Tow antitank guided rockets, and a 105-mm tank gun); detecting sensors for personnel, armament and combat equipment; a laser control gun for umpires.

The laser beam works with two codes representing the concepts "annihilated" (when a direct hit is scored by the opposing side's fire weapon) and "hit" (when the target is not hit dead center).

In addition the sensor determines the type of weapon that hit the given target. When a rifleman or antitank gunner is "annihilated," a signal (a buzzer) sounds; a siren and a blinking lamp are turned on when combat equipment is "annihilated." Laser devices on "annihilated" fire weapons controlling return fire are turned off. Only an umpire (the commander) can put the weapon back in action. When a target is not hit dead center (a "hit"), the signals sound and the weapons are turned off for a short time.

On the whole the MILES system operates in correspondence with certain requirements. Thus it is designed such that rifles and machineguns cannot knock out a tank or armored personnel carrier. Coaxial machineguns on tanks and APCs can "kill" soldiers and antitank gunners. Laser devices on infantry weapons are turned on only by the sound of a dummy round, which makes it impossible for the soldier to "fire" the ray if a misfire (malfunction) occurs or if ammunition has run out.

As we can see, the U.S. Army makes wide use of various technical resources and trainers in the training of military specialists.

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CSO: 1801/79

## MINE HAZARD

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 63-65

[Article by Lt Col V. Ostankov, cand mil sci, Lt Col V. Sadovnik, cand mil sci: "Mine Hazard"]

[Text] Striving to maintain a constant focus of tension at the southern borders of the USSR, the USA is widening its undeclared war against Afghanistan. Together with its NATO allies it has already spent over \$1 million to form, train and outfit counterrevolutionary bands. A large proportion of these assets have been used to purchase various mine-warfare equipment.

The growing number of mines and other explosive equipment that must be disarmed by Afghan and Soviet combat engineers attests to expansion of the scale of "mine warfare" by counterrevolutionaries on Afghan territory. American, English, Italian and Belgian mines have been encountered (see below for their characteristics). With the help of foreign specialists the insurgents have organized manufacture of improvised mines. The insurgents use industrially produced fuses, unexploded bombs and shells and explosives packed in various kinds of containers for this purpose.

The insurgents make wide use of combat engineer ammunition for sabotage, terrorist acts, ambushes and the mining of roads and road structures. As a rule they use solitary mines or mine clusters (groups).

Bandits set up mined obstacles to cover defensive positions, important military objectives and supply bases and to hinder supply by roads and travel of troop columns. These obstacles consist basically of either antitank and antipersonnel or mixed minefields and mine clusters or groups.

Insurgents set up booby traps in abandoned population centers (orchards, gardens, houses, schools, mosques) and on animal and foot trails. They make them out of pens, flashlights, books, dishware and other household objects--even children's toys. This is done to frighten the peaceful population, to create terror.

Insurgents select terrain that is hardest to negotiate as locations for mined obstacles--mountain passes, narrow valley entrances, defiles etc. Road



sections crossing over benches, steep turns and downgrades (upgrades) and road structures (bridges, tunnels) are destroyed beforehand or prepared for demolition. The approaches to them, places suitable for parking or turning vehicles, for day and night halts, for helicopter landing and boarding, and trails leading to water sources are mined.

Work is usually organized as follows. The necessary preparations are made at night (a day or more before a column passes). For example hollows are chopped out of pavement in certain road sections, and beneath them, in the roadbed, holes are dug out for mines, and detonating lines are laid. All of this is carefully concealed, and control posts are set up and observation is organized on commanding heights and in other convenient places.

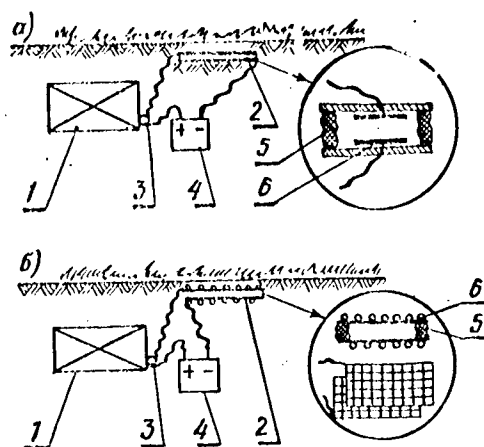


Figure 1. Mine Exploded by a Pressure-Activated Electric Switch (a--wooden electric switch with metallic contacts. It is activated by wheeled or tracked equipment riding over it; b--electric switch made from a metallic grid. The circuit is closed not only by pressure from a load of a certain size but also when its detection by a prod (1) is attempted): 1--explosive charge; 2--electric switch; 3--electric detonator; 4--power source; 5--rubber inserts; 6--switch contacts

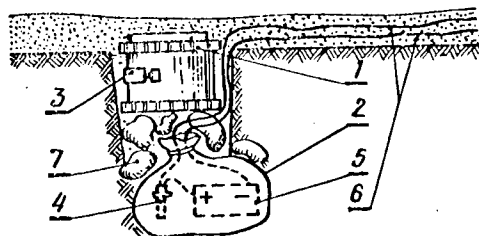


Figure 2. Reinforced Wire-Controlled Mine: 1--type TS2.5 mine; 2--explosive charge (10-15 kg of explosives); 3--secondary

fuse (anti-lift device); 4--electric detonator; 5--power source; 6--mine control wires; 7--rocks concealing the main charge

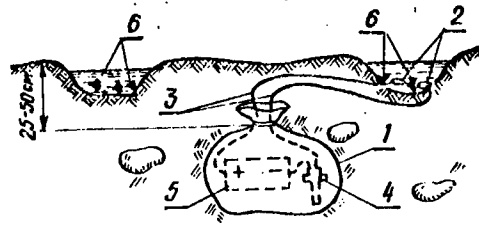


Figure 3. Reinforced Mine with Electric Switch Contacts Hidden at the Bottom of Water-Filled Track: 1--explosive charge; 2--electric switch plates; 3--wires; 4--electric detonator; 5--power source; 6--metal fragments (shells)

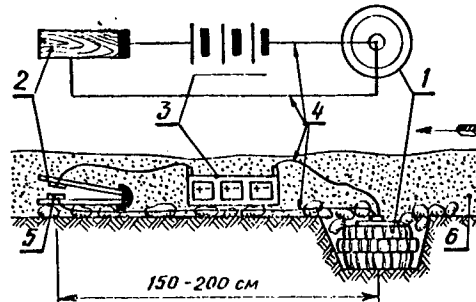


Figure 4. Antitank Mine Used Against Tanks Equipped with Mine Clearers: The mine's pressure lid is removed. An electric detonator is used in place of a fuse. The arrow shows the direction of movement of a tank equipped with a mine clearer: 1--type TS 6.1 mine; 2--simple wooden switch (clothespin type); 3--power source; 4--wires; 5--switch contacts; 6--road dust

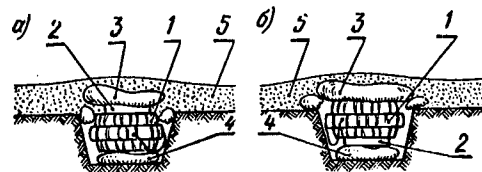


Figure 5. Method of Protecting Mines Against Prodders: 1--type TS 6.1 mine; 2--mine fuse lid; 3--flat rock covering the mine; 4--rock slab keeping the mine from settling into soft earth; 5--concealing layer (sand, dust)

# Technical Specifications of NATO Antitank Mines

Basic Characteristics	Italy			USA	Great Britain		Belgium	Sweden
Mine brand . . . .	TS2.5	TS6.1	H55	M19	MK5	MK7	M3	M102
Mine type . . . .	Anti-track	Anti-track	Anti-track	Anti-track	Anti-track	Anti-track, hull floor penetrating	Anti-track	Anti-track
Total weight, kg .	3.56	9.8	7.3	12.7	5.4	13.6	6.8	8.0
Explosive weight, kg . . . . .	2.5	6.15	5.5	9.5	3.6	9.1	6.0	7.5
Dimensions, mm . .								
Length (diameter)	205	270	280	330	203	330	220	300
Width . . . . .	-	-	-	330	-	-	220	-
Height . . . . .	110	180	130	76	100	127	130	70
Type explosive . .					TNT	TNT	Triallene	TNT (Hexotol)
Type fuse or brand	Pneumatic pressure-activated		Pneumatic H160	Mechanical M606	Mechanical No 3	Mechanical No 4, No 5, pin-type	Mechanical M30	Mechanical
Triggering force, kg . . . . .	180-210	180-240	200	160-225	150-200	180	250	150-250
Housing material .	Plastic		Plastic		Steel		Plastic	No housing

Detectability by induction mine detectors . . . .								
		Undetectable			Detectable		Undetectable	
Anti-lift elements	+	+	+	+	-	+	-	-

Such preparation allows the insurgents to lay mines within a few minutes as the column approaches. Mines can also be laid as the column passes by capitalizing on gaps between subunits and individual vehicles. The bandits try to demolish vehicles simultaneously in several places after the movement support detachment (breaching team) passes. Mines controlled by radio or wires are used for this purpose.

It must be remembered that the insurgents set up obstacles extremely inventively, with great cunning and insidiousness. Some minelaying variants are shown in figures 1-5. For example Figure 1 shows a variant where a mine can be triggered not only when a vehicle rides over the electric switch, but also if an attempt is made to examine this area with a prodder.

The method shown in Figure 2 is used often. If the mine is detected, a supplementary mine laid below or to the side of the former and controlled by wires is either exploded immediately (knocking out the combat engineers) or left alone and used to knock out combat equipment passing by later.

The insurgents lay almost all mines in an anti-lift configuration. Moreover not only can there be several methods of triggering a mine, there are also several ways to make the mine tamper-proof. Mines can also be set for selective destruction (depending on the type of switches--just tracked or both tracked and wheeled equipment), against tanks equipped with mine clearers, to go off after ridden over several times (after a mounded concealing layer of earth is worn down) and so on.

All mines are artfully camouflaged to fade into the background (for example a car wheel is rolled over the location of a mine on a dirt road several times, creating the appearance of a well-traveled rut). As a rule, mined obstacles are covered by fire. False obstacles are installed and interference is created to make it harder to search for mines by mine detectors. For example a large quantity of metal fragments (see Figure 3) or pulverized explosive is sprinkled or buried in the dirt. To dull the sensitivity of mine-sniffing dogs the mines are wrapped tightly in cellophane bags and irrigated with kerosene or diesel and other kinds of oils.

We have examined only a few of the methods of installing mines used most frequently by the insurgents. It should be emphasized that they are undergoing constant modification. This means that the resources and methods of fighting them must be aggressively improved. And they can be fought quite successfully. Evidence of this can be found in the rich experience of many Afghan and Soviet combat engineers.

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CSO: 1801/79

## KEEPING THE COLUMN MOVING

Moscow VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 66-68

[Article by Guards Capt N. Starodymov: "Keeping the Column Moving"]

This was not the first time that the combat engineer subunit commanded by Officer V. Kurinnyy was ordered to help Afghan friends. So it was that they were once again given the mission of assuring the uninterrupted movement of a column consisting of a certain Afghan subunit.

The terrain on which they were to do their job was rather typical of Afghanistan. High mountains, ravines, and poor, twisting narrow roads. In some places cliffs squeeze the narrow roadway from both sides. In other places the road hangs suspended over an abyss, timidly hugging a huge monolith of a mountain disappearing beneath the clouds. At other times it clammers up into the clouds to then drop swiftly into another valley.

Nonetheless it is incomparably easier to follow the roads than to go cross-country, where the dry channels of mountain washes, chains of huge rock piles called "dragon's teeth" stretching down from the mountains and other natural obstacles make travel extremely difficult.

But on the roads, the insurgents have initiated "mine warfare" on a major scale. They do not reckon with the fact that these roads are used not only and perhaps more accurately not so much by Afghan and Soviet soldiers as by the peaceful residents of surrounding kishlaks. Road sections mined for dozens of kilometers have been encountered.

Under these conditions the role played by the march support detachment (OOD), within which the combat engineers were to operate, grew noticeably. First of all they had to mark the route of travel. This was not easy to do. To stay to the roads meant to increase the rate of march, but it also meant a greater risk of setting off mines. To go cross-country meant a loss of time. After carefully studying the route, they arrived at the following decision. They would travel chiefly on the roads, detouring the most dangerous places, meaning that they would have to be ready to both clear mines and construct cross-country roads. This is what the personnel were prepared for, and the OOD was equipped with these objectives in mind.

## On the Roads

As I mentioned earlier, the insurgents usually lay their mines on roads. Therefore when traveling on roads, especially paved roads, we must try not to ride over areas where the road is disturbed, or over any objects lying on the roadway. After all, a mine can be concealed even under a stone.

On dirt roads, mines are sometimes laid right on the dirt and covered with dust, and there's plenty of that around.

The insurgents usually install their lethal charges at night. Consequently we must be most attentive in the morning. And if there is no tank with a mine clearer ahead or if combat engineers have not passed, we must be more observant. One time Senior Lieutenant A. Baskov noticed a poorly concealed mine in a rut just ahead of his moving fighting vehicle. He gave the command to halt, and the vehicles managed to stop in time. Installing mines in a rut is one of the most widespread methods of mining roads.

This is precisely why a tank equipped with a mine clearer travels at the head of the column. This is the main resource of the reconnaissance and obstacle clearing group detached from the OOD. A combat engineer detachment follows the tank with prodders and mine detectors. Next travels a road and bridge building group within the range of visual communication. Besides combat engineers, it contains one or two obstacle-clearing engineer vehicles. The group traveling on this route was headed by S. Naumyuk, an experienced officer. When necessary, an obstacle-clearing engineer vehicle traveled in front, punching holes through slides or creating detours, and the column moved further.

Sometimes a mine would explode even beneath a tank equipped with a mine clearer. This would usually happen on a sharp turn. And the mine would usually explode beneath the rear roller. Why? The answer was not discovered right away. The problem is that most dirt roads in the mountains are ruts in which not only vehicle wheels and tracks but also mine clearer rollers roll. At a sharp turn the rollers may deviate from the rut, leaving the rut unswept.

The same thing also happens at the end of a steep upgrade. For a moment the mine clearer sort of hangs over the roadbed, failing to create the needed pressure on the mine's pressure lid. And when a track rolls over it, the mine explodes. Determining this "dead space" is a matter of experience for the mine specialist.

## Off the Roads

Insurgents also use other methods to delay the movement of columns. Thus rock slides are often found blocking roadways.

Causing a slide is not a hard thing to do in the mountains. One well-placed explosive charge, and the road will be covered completely by huge rock piles. Great proficiency is required of the operators of mine-clearing engineer

vehicles in such conditions. After all, it is not an easy thing to clear such a slide. But there are soldiers in Officer Kurinnyy's subunit who are able to carry out such tasks quickly. Take as an example Junior Sergeant O. Strizhak and his comrades.

They were the ones who had to carry the main load when the subunit was forced to detour a bridge over a deep canyon destroyed by insurgents. It did not look as if there was any way to get around, and the insurgents hoped to delay the column here for a long time. The fact that they mined the approaches to the bridge as well as the surviving central support is evidence of this.

The bandits were so sure that it would take more than one day to restore the bridge that they did not even set up an ambush nearby, as they usually do.

But the scouts reported that there was an old trail 3 km from the bridge that reached the floor of the canyon, and that there was an easy enough way out. To descend into the canyon, all they had to do was widen the trail in some places and reduce the steepness of the descent.

The combat engineers went to work first. Using a directed charge they dropped a huge block suspended above them to the floor of the canyon, and then they drilled boreholes and used small charges to "loosen" the rock. Next the crews of the mine-clearing engineer vehicles leveled the rubble to create a relatively gentle descent. And although winch cables had to be attached to the vehicles on the downgrade as a safety precaution, in several hours the entire column surmounted the canyon without mishap.

To make the detour faster, the initially adopted column of march was altered. After all, a tank equipped with a mine clearer and a mine-clearing engineer vehicle are generally slow. But now the danger of exploding mines was reduced. Therefore reconnaissance groups were sent ahead on several parallel routes. Whenever they reached any kind of obstacle, they immediately reported it to the commander by radio.

At the same time they determined where the obstacle could be crossed the easiest. That is where the column was sent. There, the mine-clearing vehicles quickly created a passageway for the OOD, which immediately rushed farther forward. In this case one of the mine-clearing engineer vehicles was left behind to improve the passageway, and the second went on with the OOD. The rate of advance was increased significantly, and soon the column was back on the mountain road again. The insurgents had not expected the column to appear here, and they had no time to prepare--no mines were encountered.

#### And Back on the Road Again

Nonetheless the OOD assumed its former formation, with the tank and mine clearer in front. With the onset of darkness explosive devices are laid literally within hundreds of meters of the forward vehicles of a column. Even children, who have no suspicion of the risk they are made to take, are forced to do this.



In the last few dozen kilometers the road became so narrow that the mine-clearing tank could barely get through. Places like these, where it is hard to use engineer equipment, are precisely what the insurgents mine on priority. Mine-sniffing dogs were a great help to combat engineers searching for lethal "surprises" here.

It must be said that they had mastered their military specialty reasonably well. Sergeant L. Melnik told me that dogs can locate mines of practically all types--both those that are hard to detect with a mine detector, and those that are buried deep. It is very hard for dogs to work in the local climate, which is why soldiers show such great concern and love for their helpers. They recall a time when the subunit ran out of water in the mountains. The soldiers contributed literally the last drops out of their canteens for the dogs.

Combat engineers search for mines with dogs in the following fashion. The handler and his four-legged helper walk in front. Combat engineers carrying prodders follow 15-20 m behind. The dog zig-zags along the road. On discovering a mine, it sits down. The handler verifies the presence of an explosive object with a prodder and marks this place with a special metal flag. Then the mine is removed or destroyed in the usual manner.

I would like to emphasize in conclusion that in this mission, Officer Kurinnyy and his subordinates made full use of the experience they accumulated on similar missions carried out earlier. At the same time they did acquire additional valuable experience while on the march, as was described above.

Practically every mission into the field adds something new to the piggy-bank of experience in organizing mine-clearing operations. Relying on it to improve one's habits and abilities, and acquiring new experience which can then be used as the basis for growth of proficiency is the formula for the success of the combat engineers, who are honorably performing their international duty in Afghanistan.

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CSO: 1801/79

## SNIPERS OF THE AIRWAVES--FEARLESS WARRIORS

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 69-71

[Article by Col Yu. Churkin, Maj V. Fisun: "Snipers of the Airwaves--Fearless Warriors"]

[Text] "The Soviet Army and Navy," noted Comrade M. S. Gorbachev in the Political Report of the CPSU Central Committee to the 27th Congress of the Communist Party of the Soviet Union, "possess modern armament and equipment, they have well-trained personnel, and trained commanders and political personnel selflessly devoted to the people. They are honorably fulfilling their duty in a most complex, sometimes severe situation." These words also pertain fully to those who are fulfilling their international duty with honor and merit in the Democratic Republic of Afghanistan today.

Common Afghan soldiers refer to the limited contingent of Soviet troops in Afghanistan as the grandsons of the great Lenin. And not because most of them wear a Komsomol badge with the silhouette of the leader of the world proletariat on their chests. The people see this great spiritual kinship in the affairs and deeds of our soldiers.

Take at least Major A. Permyakov, a communist and a cavalier of the orders of the Red Star and "For Service to the Motherland in the USSR Armed Forces," 3d Degree. A graduate of the Ryazan Higher Military Command Signal School imeni Marshal of the Soviet Union M. V. Zakharov, he has participated many times in efforts to support combat activities aimed at defeating insurgent bands, and he has always acted valiantly and selflessly.

One summer month the signal subunit was undergoing training. The terrain was extremely rough, and the operating rooms and stations had to be deployed on a small rocky ledge. The personnel worked fully armed, with bullet-proof vests and steel helmets. Battle outposts were organized as well.

The insurgents decided to annihilate the control post, and they began showering it with mortar shells and rockets. One of them exploded next to the radio relay station, and another knocked out the power supply. Despite the barrage, Major A. Permyakov and driver-electrician Private L. Kobalskiy took to repairing the diesel engine. Another explosion, and a shell fragment caught the officer on his side between the flaps of his bullet-proof vest.

Wounded as he was, Major Permyakov kept on working to repair the damage.

Here is an excerpt from Major Permyakov's award citation:

"He did not abandon his combat post in the face of heavy insurgent mortar and rocket fire, taking the necessary steps to repair damage to communication equipment. Being wounded, and fighting off unconsciousness, he organized fire suppression at the radio relay station. For personal courage, bravery and initiative in the performance of a combat assignment while rendering international assistance to the people of Afghanistan, Captain (that was his rank at that time) Permyakov deserves to be awarded the Order of the Red Star...."

We can add to this that the valiant officer checked himself out of the hospital early, and immediately returned to his duties. That is the kind of person he is--concerned, and devoting himself fully to all work.

Senior Lieutenant M. Kokhan, a cavalier of the Order "For Service to the Motherland in the USSR Armed Forces," 3d Degree, graduated from the Poltava Higher Military Command Signal School. It was there that he became a communist and a radio-telegraphist 1st class.

His immediate commanders and fellow workers have this to say about him: "Senior Lieutenant Kokhan acts boldly and decisively in a combat situation. He possesses diverse, deep knowledge. He has had excellent professional training. He guides himself by high principles when assessing the actions of his comrades. He is devoted to military service. He works toward goals persistently. He is willful. He performs any assignment with great eagerness."

Once bandits ambushed Lieutenant Colonel A. Melnichuk's signal subunit as it traveled in column formation. The bandits managed to set a vehicle-mounted radio station on fire with a grenade thrower. The driver was shell-shocked.

Senior Lieutenant Kokhan and his crew put out the fire. Then they repaired the engine, and although the steering mechanism was damaged, he took the wheel. He drove the vehicle on the twisting mountain road for more than 60 km. The equipment was delivered to the unit and restored.

The officer's competent and energetic actions helped to prevent accumulation of vehicles in a danger zone, and to protect expensive equipment from annihilation.

Another time Senior Lieutenant Kokhan was transferring his communications responsibilities to Senior Lieutenant A. Smerdov when enemy gun and mortar shells began falling on the area in which the operating rooms and stations were located. The officer could have disappeared into the shelter. But he remained to help his comrade, who had never experienced such a situation before. His calm and clear commands and his quick reactions to the complex situation went a long way to ensure that radio communication with distant stations would remain practically uninterrupted.

A little while later a message was received that the radio relay station had been damaged by mortar shell fragments. The officer gave orders to immediately reroute communication to a back-up communication link. Under fire, radio relay mechanic Private A. Khvichiya quickly turned the antenna to the distant station and restored disturbed communication within just a few minutes.

Yes, the officer's personal example encouraged soldiers to fulfill difficult tasks selflessly and with the fullest possible effort many times.

Signal officers acquire rich knowledge and experience by maintaining communication during the combat activities of Soviet and Afghan subunits. And in their routine life they work at full potential as well. This is most important. After all, to become a real commander, the officer must constantly study, and teach his subordinates to act competently in the most complex conditions.

Learning and teaching. Sometimes it is felt that these things are out of place in a combat zone. But experience refutes this opinion.

Officers M. Kokhan, A. Kremenchutskiy, A. Permyakov, Yu. Pogorelyy, V. Cherepov and many others transmit their combat experience to subordinates and persistently teach them to fire accurately, to make the most of camouflage and concealment, and to economize on every swallow of water in the hot desert. And of course, to maintain dependable, uninterrupted communication under any conditions. It is no accident that signalmen act just as competently as their commanders.

Here are a few examples. As we know, certain signal subunits--particularly the crews of radio stations and command-and-staff vehicles (KShMs)--must often perform their tasks on their own: They are attached to motorized riflemen, to tankmen, and to Afghan units. In short, they must maintain communications independently.

The unique features of mountain desert terrain and the perpetual danger of damage to equipment by insurgent mines and of ambushes require that radio station and KShM specialists not only have a high level of professional training but also high moral, political and psychological qualities. Driver-electricians privates A. Angerchik, S. Zinovyev, V. Pavlov and others have successfully completed journeys in difficult conditions on several occasions.

The KShM crew headed by Senior Sergeant V. Semenyuk, for example, was given to an Afghan subunit to provide coordination with a Soviet subunit. Five signalmen set themselves up in a small fortress in a poorly accessible mountain hamlet.

The situation was such that the signalmen had to immediately abandon the population center, but it was too late before the crew learned of this. A large band (several hundred insurgents) cut them off from the Afghan subunit. They still had enough time to leave, abandoning their combat equipment, but their sense of responsibility for it and for maintaining communications kept them from doing so. The radio channel was the only thread that connected the

Afghan subunit to the rest of the world beyond the mountains. To deprive them of communications would have meant leaving them to their own destiny. And so the signalmen decided to the man to stay in place.

They immediately began organizing an all-around defense. They prepared the infantry fighting vehicle for demolition, and then moved over to a house. Senior Lieutenant V. Semenyuk and Private V. Markin set up in the first story, and junior sergeants V. Goncharuk and V. Yankin and Private V. Malyshkin set up in the second.

The insurgents attacked as soon as it became completely dark, but they were met by grenades and aimed fire from a machinegun and assault rifles. For seven straight hours after their failure the insurgents pounded the position of the signalmen with two guns, mortars, grenade throwers and infantry weapons. Again and again they attacked, and rolled back under fire. At night after a short lull between two insurgent attacks the soldiers convened in the first story and conducted an open Komsomol meeting (Private Markin was not yet a Komsomol member). It was chaired by Komsomol activist Senior Sergeant Yankin. No minutes were taken, of course. There was one question on the agenda: "Holding on and fulfilling the mission." Brief statements, a vote, firm, manly handshakes, and once again back to the embrasures.

The battle resumed with new strength. The steadfastness and heroism of the tiny group of Soviet soldiers and their tactically competent actions prevented the insurgents from capturing the fortress. In the morning the bandits were defeated by Afghan and Soviet subunits sent in relief.

All five signalmen were given high state awards for their bravery and their exemplary fulfillment of international duty. Communists demonstrated their trust in Senior Sergeant V. Semenyuk: They accepted him into the ranks of the Leninist Party. And Private Markin became a Komsomol member after this battle.

The crew of another KShM consisting of junior sergeants S. Khoroshilov (the chief) and A. Aliyev and privates R. Zaynulin and A. Korolev measured up to the valiant five in its actions. These signalmen were directed to provide communications to a certain Afghan unit, the subunits of which had entered into combat with large insurgent forces in the border zone by Pakistan and were pushing them back.

But the insurgents quickly transferred another band out of Pakistani territory. Part of it maneuvered to the rear and managed to surround the crew of the KShM.

An unequal battle ensued. For 4 hours the signalmen not only successfully repelled the attacks of the besieging insurgents but also maintained communication with their senior commander, reporting the situation on the battlefield. When it became critical, Junior Sergeant Khoroshilov decided to break out of the encirclement on a narrow mountain road. It was guarded by a small group of insurgents. Because the road was well covered by fire, the insurgents apparently thought that equipment would not try to pass through.

Completing a decisive but dangerous charge (the APC could have dropped into the abyss at any time), the Soviet soldiers annihilated several insurgents and broke out of the encirclement. Their courage and heroism were marked by state awards.

Signalmen have had to perform all kinds of amazing missions! Here is what happened once: A KShM crew consisting of Junior Sergeant S. Kartashov and privates A. Semenov, V. Smetanin and A. Tripichenok were instructed to carry a wounded Afghan officer to a helicopter pad.

The road through the ravine had transformed into a quagmire after the rain. Even an APC would not make it through. But there was another way--a narrow trail following a steep slope. It may have been mined by the insurgents. The risk had to be taken. There was nothing else they could do. Without a second thought, driver-electrician Private Tripichenok drove the APC along the dangerous path. They were already beyond the spot when at a turn in the road the insurgents suddenly launched a grenade right at the front of the vehicle. The personnel carrier's undercarriage was damaged. Defending themselves, the signalmen occupied an advantageous position and repelled the attackers. Private Tripichenok repaired the damage, and the crew went on to complete its mission.

Many such examples could be presented. And their number is constantly growing. All who have had experience in maintaining communications and in acting in combat conditions do not wait until others turn to them for advice; instead, they persistently transmit their experience to others, and they never let simplifications in training slip by unattended. Each day the officers and soldiers maintain their watch on the airwaves, and demonstrate with practical deeds that the baton of heroism of senior generations is now in dependable hands.

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CSO: 1801/79

## SEEKING, TESTING, FINDING

MOSCOW VOYENNNY VESTNIK in Russian No 10, Oct 86 pp 72-74

[Article by Capt S. Chebyshov, specialist 1st class, Moscow Military District:  
"Seeking, Testing, Finding"]

[Text] Training radio-telegraphists in a training subunit is not an easy task. Yesterday's schoolchildren must become familiar with complex equipment and learn to operate it competently in a short time. Without occupational selection, far from every young soldier can successfully assimilate the specialty of a radio-telegraphist and pass his tests for 3d class in the allotted time.

As we know, the combat training of radio operators is unique. Consequently there must be unique features to their occupational selection and training. Of course, the role of auditory radio communication has decreased somewhat owing to the appearance and development of other forms of communication (radio relay, tropospheric and others). Nonetheless it is still indispensable in the presence of interference and active electronic countermeasures by the enemy. Only a specialist of a high class can ensure error-free reception and transmission of instructions, commands and signals in such a situation.

Just 2 or 3 years ago, after the soldiers of the platoon learned how to receive Morse code and transmit Morse code with a key (an R-010 transmitter), the platoon broke down into leaders and slow learners. After that the best students quickly increased their rate, but the platoon could not progress quickly. The lesson leaders had to tune the entire training process to the level of the slower students. This was the main reason why 25-30 percent of the students were unable to pass their tests for 3d class.

We were naturally unhappy with this state of affairs. We finally concluded that success could be achieved only by the widest possible introduction of training procedures developed on the basis of the theory of systematic training. This approach makes it possible not only to raise the effectiveness of each lesson but also to significantly reduce the radio-telegraphist training time.

There were difficulties and doubts, of course. As a rule, new ideas always encounter mistrust at first. But in short time many of our officers were

working with the innovators literally day and night. They were persuaded that use of accelerated training procedures based on the use of training cards, performance of combat training tasks and systematic practice of developed actions was a useful and even necessary thing to do.

We are achieving reasonably good results today. In the last 2 years, 97-98 percent of the students have become rated specialists. Of them, 60 percent have competently fulfilled the standards for 2d class.

Let me describe in more detail how we use progressive training procedures to organize the initial training of radio-telegraphists.

After the wireless platoons are formed (before the start of the training year), training is organized for them. The officers acquaint the students with the history of the signal troops, and describe participants of the Great Patriotic War who were serving in the unit. One of them, a cavalier of many state awards and a communist, Senior Warrant Officer Vadim Ivanovich Davydov, shared his recollections of the indefatigable laborers of the war--the signalmen, and his own combat experience.

Then the platoon commander asks the students to watch a demonstration of work with a telegraph key and with an R-010 transmitter, and of radio communication carried on by detachment commanders. During the demonstration he turns attention to the sharp and efficient actions of the NCOs. He notes that they were recently novices themselves, but they were able to successfully master their new occupation.

This was possible owing to use of training cards, sample procedures and command and information mimic panels in the lessons and training exercises. This is why the officer asks his subordinates to acquaint themselves with the new training aids and with the rules of using them. After all, all subsequent training in their specialty would depend on how well the students assimilate (I mean assimilate, and not just memorize) the content of, for example, the command and information mimic panel and how well they learn to perform specific actions and operations right from the first lessons.

At this point the lesson leader lays special emphasis on the fact that study problems must be worked on simultaneously with error-free practical work with radio communication resources. That is, the students immediately transform their knowledge into abilities and habits. But if they are not reinforced by self-study and by training exercises, for example, they fade away.

We came to the conclusion that in the course of familiarizing the students with the procedures of organizing and conducting the training, it would be suitable for the platoon commander to demonstrate to the students how they should work at their training places. He calls in the NCOs for this purpose. The officer gives each one a number (for example one, two and so on), issues one set of training cards (sample procedures, command and information mimic panels) to each NCO, and announces the study assignment. Then the junior commanders play the role of students as they solve particular problems.



Let us examine a case where there are three persons in a group. Using a training card, Number One (the senior NCO) reads the content of the first basic operation aloud. Number Two and Number Three successively repeat aloud what was said (this facilitates assimilation of the terminology). Then the senior NCO reads the name of the operation in the column "Actions of the Student."

Number Two of the training group repeats what was said, finds the radio set control on the mimic panel (it is usually posted beforehand on the classroom wall next to the apparatus), and he shows the position at which it must be set.

Also repeating the name of the operation aloud, Number Three finds the control on the radio set and performs the prescribed action.

Thus the students learn what they must do and how. If there is a Number Four in the group (experience shows that it would be unsuitable to include more than four persons in a training group), he can monitor fulfillment of operations and actions by other students.

After the study assignment is completed, the senior NCO gives the command to exchange roles. Work continues at the training place until all students in the group have carried out the actions of each numbered position in the group. By this time the students learn to perform the given task--slowly, but clearly and without mistakes.

It would be useful at this time to demonstrate to the soldiers how to work with condensed training cards and without them. In this case it is very important to explain to the students that they must correctly name the operations from memory and state their answers clearly. I should also emphasize that when students work without the cards, they may refer to a complete or condensed training card in the case of difficulty in order to refresh their memory of the operation and the sequence of its fulfillment.

But at the same time (this should be explained in such a way that the students understand it) the students must try to memorize the sequence of operations as well as possible. Otherwise the knowledge and habits they acquire would be superficial. Also, after a while the soldiers may begin to think that they could use the diagrams for reference. And consequently that they would not need to memorize the training material.

In his conclusion the lesson leader explains the procedures of self-study to the young radio-telegraphists. There can be two ways to do this. In the first variant (when communication equipment is available) the students reinforce their knowledge and habits by training with the apparatus. This is especially useful to those who find it more difficult to assimilate the training material. Therefore, additional exercises during self-study hours promote better assimilation of work with communication resources. In my opinion this would also be a good time to hold a competition for speed.

In the second variant (when materiel is unavailable) self-study time is used to study the principles of the organization and maintenance of radio communication, and other theoretical problems. It is also used to clarify things the students do not understand and to prepare for the next lesson.

In addition the students must gain a firm understanding that their retention of things they did themselves would be better, while things which they only heard and did not do themselves would be retained worse. It would be suitable for the officer to reinforce this idea with some facts.

For example he might ask one of the detachment commanders (preferably a specialist 2d or 1st class) how many hours per week (per day) he had to train in his work to become a rated specialist.

In the concluding stage of assimilation of the specialty it is extremely important to develop positive motivation for combat training in the students, and to orient them on mastering their specialty quickly and well. The efforts, resources and time spent on this will be more than compensated later on.

Strict Timekeeping, by Capt V. Pavlyukovskiy, specialist 1st class, Turkestan Military District

I have been training radio technicians for high-power radio stations for more than 5 years. Each such station contains transmitters, receivers, multiplexing, linking and switching equipment, distributing, antenna and power supply devices and various electric measuring instruments. Young soldiers are obligated to assimilate and be able to operate all of this equipment in a relatively short time. Moreover each student must pass a test for a class rating before graduating from the training subunit.

In other words the soldier must master several associated specialties, and acquire firm habits and knowledge in each of them. But we get a rather large number of conscripts who are totally unfamiliar with radio equipment. This means that we cannot rely on previous experience in their training. It is here that we feel that new procedures are helping us to successfully complete our mission. This objective is reached with difficulty by the old traditional methods.

We use both training cards and mimic panels in the training, and we try to conduct integrated lessons. These methods of intensifying the training process save time first of all, and secondly they increase the quality of radio technician training.

It has already become a tradition to conduct lessons at training places which are in turn divided into training points. The platoon personnel break up into groups of three or four persons each. The soldiers study independently, working with study cards and training assignments. First they use complete cards. Then, after the students learn to act without mistakes, they switch to condensed cards. We have improved them somewhat here. In particular we

indicate the time necessary for each operation, as determined by intermediate-proficiency standards. This time is of course much more than is required for a satisfactory grade. But experience shows that as soon as the student assimilates the complete study card, he wants to demonstrate his ability and his skill. Therefore when the student sees the standard for a given operation on the condensed card, he tries to work better, and without mistakes.

Later on, after the students begin working without the cards, the time to complete the operations is decreased until it satisfies the standard. In our opinion this procedure is especially useful in work on a training task. In this stage the soldiers have to combine previously assimilated individual standards into a single whole, and learn to perform them in a strictly determined sequence. To avoid mistakes, the actions of the students must be kept under careful control.

A special notebook is maintained in order to permit more effective analysis of the quality with which each radio technician completes his training task. All mistakes of the student are recorded in it, and recommendations on correcting them are offered. We feel that timing by hand is obsolete. We are beginning to use a semiautomatic device for controlling fulfillment of standards. We were greatly aided in our effort by Lieutenant Colonel O. Shvidchenko's article (VOYENNY VESTNIK, No 7, 1985).

In our training exercises we gradually introduce very simple faults into the apparatus. They naturally make the training task more difficult, but this is simply indispensable for high quality specialist training. Of course the students have some trouble in the beginning, but after the appropriate explanations they begin to analyze their actions more deeply.

For example when student A. Zhuravlev found out in his training task that one of the blocks of the receiver was not working, he became confused. Assistant lesson leader Sergeant V. Karavay advised him to recall what he had done in similar cases when fulfilling a single standard. The soldier began repeating the operations of tuning the receiver once again, and he found a faulty fuse. This says that the student was able to acquire firm habits of operating the equipment by studying with training cards.

Besides learning how to operate communications equipment confidently, the students receive good theoretical knowledge in the training subunit.

I used to conduct lessons in special training by the narration-demonstration-discussion method. This took a lot of time, and some study problems had to be repeated. Moreover not all students worked actively in such lessons.

Now, using the training cards we developed and improved, the students not only learn to work on the equipment but also concurrently (this is very important) acquire the needed theoretical knowledge pertaining to the problems under consideration.

Thus it was not that long ago in the training on the technical specifications of radio stations that I used to relate all of the specifications in their entirety, and the students took notes. Then when it came time to examine

individual blocks and units of the given communication resource I had to talk about certain specifications all over again. Now all of these specifications are indicated on training cards. And as experience shows, this study problem (and most others as well) is assimilated by the students much faster. It is also important that young soldiers, including those who have a poor grasp of Russian, can use these cards for independent study.

Let me cite a specific example. There were two students in the platoon, N. Dusmatov and Sh. Khuzhakeldyyev. Both spoke Russian poorly, and they graduated from secondary school with average grades. Studying according to the new procedures, they successfully completed their tests for 3d class, and in all other training subjects they received nothing but good and excellent grades in the final exams.

I would like to note that use of training cards and mimic panels reduces the time it takes for the students to assimilate the equipment. We use the extra time for additional training with the apparatus. We devote special attention in this case to making radio channels ready for operation.

As we know, creating a radio channel requires terminal equipment or the use of a main distribution frame. But telephone and telegraph specialists have their own work to do. Therefore in order to be independent of them we created a terminal equipment simulator. And now training can go on at any time without delays.

In addition, in order to develop the students' ability to quickly make competent decisions I use what we call the "business game" method. Its essence is as follows. TA-57 telephone sets connected by a P-274M cable are installed in different rooms. A student sits down at each telephone set with an assignment, radio operating data, a duty operator's table, outgoing radiograms, blank radiogram forms and an equipment log. One at a time the students work on the problems of establishing communication, transmit coded abbreviations and signals to each other and exchange radiograms by serial number both through the radio network and through a radio link. The students receive inputs from me or the NCOs, and they make decisions on their basis without interrupting communications.

Use of the new training forms and methods makes it possible to significantly upgrade the quality of signalman training. The following facts are evidence of this. While 3 or 4 years ago around 70 percent of the graduates were able to qualify for a class rating, today practically all soldiers become specialists 3d class.

Analyzing the results of the last graduating class, I can see that reserves still exist, and that mistakes were made. Thus the transition from complete training cards to condensed ones often took too long. This indicates that the lesson leader and his assistants do not always prepare themselves carefully for each lesson, and they do not attentively monitor the actions of subordinates. Assignments to work on study problems are not always written up with a consideration for the training level of the students. On occasion this made it necessary to adjust the schedule for trading training places right in the course of the training.

The experience we have accumulated persuasively shows that the new procedures not only make it possible to train communications specialists well in a shorter time, but they also require a serious and thoughtful approach.

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CSO: 1801/79

## PREPARING STUDENTS PSYCHOLOGICALLY

Moscow VOYENNNY VESTNIK in Russian No 10, Oct 86 pp 76-79

[Article by Col Yu. Krasner, Lt Col P. Kuropatkin, cand mil sci: "Preparing Students Psychologically"]

[Text] The events of recent years indicate that aggressive imperialist circles, and chiefly the USA, are continuing to pursue an arms race, to intensively develop new resources of mass annihilation and modernize existing ones with the idea of using them in combat. They are justifying this action by a fabricated "Soviet military threat." This means that if a new world war is started, the troops will have to conduct combat activities in the face of wide use of mass destruction weapons by the enemy, in zones of extensive destruction, fire and radioactive and chemical contamination. Moral, political and psychological tempering of the personnel, and prompt and competent implementation of measures to preserve and restore the fighting efficiency of units and subunits acquire especially important significance in such a complex situation. High requirements are now imposed on comprehensive preparation of soldier-chemists, who will have to operate in centers of mass destruction more often than others, rendering assistance to troops in effecting protection against mass destruction weapons and dealing with the aftermath of the enemy's use of nuclear and chemical weapons.

The Tambov Higher Military Command Red Banner School of Chemical Defense is doing much to intensify the training process, and especially to intensify the moral, political, physical and psychological tempering of future officers.

The school collective is focusing its main efforts on shaping a Marxist-Leninist philosophy and a correct idea of the nature of modern combat in the students, and on instilling boldness, decisiveness and confidence in the effectiveness of the organic armament and equipment of the chemical troops. All of our officers try to strictly follow the principle of "teaching themselves and teaching students to fight by modern methods," and they believe that their primary responsibility is to raise their own ideological, tactical, specialized tactical and technical training levels and improve their teaching skills.

First of all we make sure that all students understand the growing military threat and the possibility that imperialists may suddenly go to war using mass

destruction weapons. This generates a desire to master the specialty quickly, and a readiness to act at any minute with full exertion of spiritual and physical strengths.

Instructors of social disciplines make a great contribution to developing the students' Marxist-Leninist philosophy and their faithfulness to communist ideals, and to instill revolutionary vigilance and class hatred of imperialism as the basis of psychological preparation. As an example lessons conducted in the Marxism-Leninism department by officers A. Otvetchikov, N. Bulgakov, V. Shmanin and others carry a significant educational charge.

As we know, psychological preparation is an important component of field training. Field exercises open up wide possibilities for developing the resourcefulness and steadfastness of the students, their capability for enduring physical and psychological loads, and other fighting qualities. Experience shows that well organized field exercises conducted at high intensity in a situation as close to that of real combat as possible are becoming a real school of combat and professional proficiency for students.

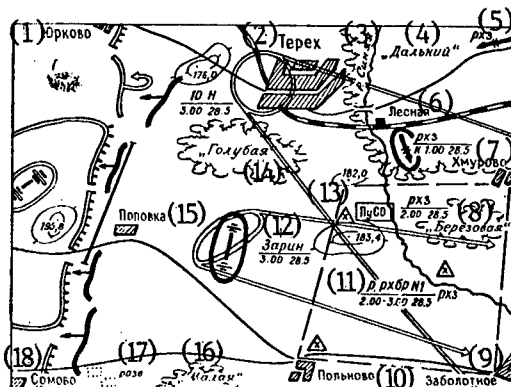
Specialized tactical training and exercises are conducted in all kinds of weather, day and night. In them, the students learn to estimate the situation quickly, to make prudent decisions, to firmly control subunits and to ensure fulfillment of missions. Boldness and persistence is developed, and the will of the future commander is tempered. As an example I can cite a specialized tactical exercise conducted by instructor lieutenant colonels V. Romanenko and V. Sorokin in the subject "Actions of a Chemical Defense Company in the Offensive." During it, the students practiced what they would do as the commanders of subunits in various critical situations. The lesson leader and his assistants used simulation resources to expertly complicate the situation, and they posed new tasks before the students. The students usually received incomplete information on the enemy, friendly troops and radioactive and chemical contamination on which to base their decisions. Sometimes the information was even contradictory. They were compelled to act in the face of a rigid time limit.

The students knew that according to their training schedule their training company was to do its field training during the day. But the exercise was started 12 hours earlier (according to a plan approved by the school chief) with an assembly signal. It was night, and some students were rather confused at first. Just the fact that it was a surprise field exercise at night required some exertion of moral and physical strength. This in a sense emphasized the need for being ready to act under all kinds of conditions.

Next the lesson leader announced the assignment and the tactical situation, which differed fundamentally from the sort the students had been oriented on before. This in turn introduced some complexity, inasmuch as they had to reorient themselves quickly to new tasks, and display psychologically steadfastness and certain volitional qualities.

The initial tactical situation was as follows (see diagram):

Suffering defeat in the battle for Terekh, the enemy went over to defense at 2200 hours on 27 May on a line



Key:

- |                             |  |
|-----------------------------|--|
| 1. Yurkovo                  | 11. Radiological, chemical, bacteriological reconnaissance company |
| 2. Terekh                   | 12. Zarin  |
| 3. Sinyaya River            | 13. Special processing point                                       |
| 4. Dalniy                   | 14. Golubaya   |
| 5. Chemical defense company | 15. Popovka  |
| 6. Lesnaya                  | 16. Malaya   |
| 7. Khmurovo                 | 17. Ruins  |
| 8. Berezovaya               | 18. Somovo   |
| 9. Zabolotnoye              |  |
| 10. Polnovo                 |  |

extending from Yurkovo to Hill 195.8 to Somovo. He brought up reserves in order to break up our troops' advance, and according to the intelligence he was preparing to use mass destruction weapons.

Our units were fighting on a line extending from Hill 176.0 to Popovka to the ruins, and they were undergoing regrouping in order to resume the offensive in a westerly direction. After replenishing its supplies the chemical defense company marched into the eastern outskirts of Terekh prepared to conduct radiation and chemical reconnaissance of the routes of advance, and for special processing of the subunits.

Soon after, the company commander received instructions to conduct radiation and chemical reconnaissance of the region bounded by Hill 182.0, Polnovo, Zabolotnoye and Khmurovo and deploy a special processing point on the northern slope of Hill 183.4 by 0300 hours on 28 May.

Student V. Myalovitskiy acted as the commander of the chemical defense company in the first stage of the exercise. After receiving his mission he quickly



clarified it, estimated the situation and made the correct decision. For training purposes the instructor listened to what other students had to say in regard to this problem as well. Then he gave the order to move out.

According to the scenario inputs the company column was subjected to an enemy air strike, and it had to cross obstructions and zones of fire and chemical contamination. The students conducted special processing of organic equipment and weapons. Simulation resources were used to create a corresponding situation of surprise for the students.

Summarizing the results of the first stage, the exercise leader emphasized that student Myalovitskiy completed his missions successfully. He displayed resourcefulness, he acted calmly and confidently, and he controlled his subordinates firmly in complex situations. This was made possible by his conscientious attitude toward training, and by his aggressiveness in specialized tactical exercises, and especially in group exercises.

In the next stage of the exercise the situation became even more acute. At 0300 hours on 28 May the "enemy" made nuclear and chemical strikes against advancing subunits, their regions of concentration and their fire positions. In particular the students saw a simulation of a ground nuclear burst northwest of their location. Communication with the command was conditionally broken. The students were able to determine by forecasting that the region of operations of the company's subunits would be subjected to intensive radioactive contamination within the hour. They could also expect injurious concentrations of highly toxic war gases drifting in from the region of the chemical strike south of Golubaya Grove.

Many students acted coolly under these conditions, fulfilling their missions knowledgeably. Acting company commander student S. Gubin gave the chemical alarm signal by radio, by voice and with a chemical attack alarm flare. He gave orders for the personnel to cover themselves in slit trenches, in folds in the terrain, and in armored vehicles. Contamination of the air by radiation and by war gases was checked continuously in all subunits. The commander sent one chemical reconnaissance patrol out to select a new place for the special processing point. Later on, as the situation made itself known, he quickly updated his plan and thoughtfully assigned missions to the platoons.

This approach to the exercise required the students to display boldness, skill and aggressiveness, and encouraged them to think hard, since they had to make decisions in limited time, in the absence of complete data on the situation, and under the constant threat of injury to the personnel.

Experience shows that not all students can fulfill their responsibilities successfully in such complex conditions. In critical situations some of them lose self-control; they take too much time to reveal and estimate the tactical situation, they are unable to reach suitable decisions right away, and their leadership of their subordinates is weak. They have often made mistakes in maintaining their orientation on the terrain and in work with organic equipment, and they have displayed nervousness and excessive fussiness. This is understandable. A commander's reaction to abrupt changes in the situation

depends on individual features--memory, character, temperament and, most importantly, knowledge and habits. Shaping the fighting qualities and occupational proficiency of a commander is not a simple task.

Our instructors attach important significance to finding effective ways to raise the psychological preparedness of future officers in the course of the entire training process. They take account of the fact that the depth of a commander's habits reveals itself not only in his ability to perform a mission better but also in a creative approach to preparing his subunits and to their comprehensive support on the basis of real possibilities.

Utilizing different techniques the students learn to predict the development of events on the battlefield and to correctly assess the possibilities of the enemy and of friendly subunits with regard for the psychological steadfastness of the subordinates in relation to abrupt changes in the situation such as, for example, sudden creation of centers of mass losses. An important role is reserved for technical training, for the ability to correctly organize operation of organic equipment and to make fuller use of its potentials with the purpose of carrying out chemical support measures well.

To prepare the students for aggressive actions in combat and to impart the psychological qualities necessary for this, the instructors make sure that the students deeply assimilate the regulations, manuals and training aids, and they try to give them more experience in fulfilling the responsibilities of the commander associated with surmounting emotional loads.

In the course of group exercises and specialized short tactical exercises many instructors pose problems that require creative thinking and out-of-the-ordinary solutions. This is achieved through competent use of simulation and technical training resources, through unexpected scenario inputs and through creation of various sorts of problematic situations.

The students are asked to independently think out and determine the ways of solving a given problem, and to make conclusions concerning complex situations arising on the battlefield. As a rule, new problems requiring that the students take a creative approach to utilizing knowledge acquired previously in another tactical situation are introduced into each tactical assignment included in a subsequent field exercise. If the first assignment on a given topic was carried out in daytime, the second is organized at night, another is organized in different terrain or in different weather conditions, and so on.

At a school, some training, especially in actions of a detachment or a platoon, must be conducted on the same training fields. But even in these cases we gradually increase the complexity of the specialized tactical problems; we try to communicate incomplete and contradictory data on the "enemy" and on the radiological and chemical situation to the students in the field, and to place them in new conditions each time, ones including elements of danger and risk, within controllable limits. As an example subunits might begin by working on things they have to do while on the march, and later on in offense, in defense and so on. In these cases some students try to complete

their tasks in accordance with a previously assimilated pattern, without thinking deeply about the information they receive. At such times the instructors give examples from the Great Patriotic War attesting to the injuriousness of such stereotypic thinking.

The students are always provided a possibility for displaying complete independence in decision making. And it is not until the instructor completely analyzes the variants and opinions they express that he logically leads the students to the correct decision. As a rule, specialized tactical exercises are conducted on unfamiliar terrain in the third and fourth courses, and they are always problematic in nature.

A procedure for imparting command skills to students in the course of practical training was introduced at the department of chemical troop tactics. It boils down to teaching the students to work in parallel as detachment, platoon and company commanders. Special equipment and various trainers are widely used in this case to permit each student to work intensively on practical problems on an individual basis. Loudspeaker communication is organized in such training to announce decisions, to issue instructions, to assign missions, to present radio messages and so on.

Problems associated with increasing the educational significance of the training process and the moral, political and psychological preparedness of the students are examined regularly at department meetings and conferences on teaching methods. We have developed and are making successful use of basic criteria for evaluating both theoretical knowledge and the actions of students pertaining to maintaining orientation on terrain, clarifying a mission, making various calculations, giving orders, estimating the situation, reporting decisions, assigning missions, conducting radiological and chemical reconnaissance, carrying out specialized tactical training and other problems. This has made it possible to develop a single approach to analyzing the skills of the future officers.

We believe that regular training in specialized classrooms is an important reserve for improving the practical habits of students. Such training is carried out simultaneously with senior and junior grades, and the students perform at different positions. With this purpose all classrooms are equipped with telephone, selective circuit and loudspeaker communication, which makes it possible to assign missions and receive messages in close-to-real conditions, in the presence of intensive interference and simulated enemy countermeasures.

Anyone who attends such training is persuaded that it is interesting, and it produces considerable benefit. In it, students in junior grades act as detachment and platoon commanders, while senior students act as higher commanders and chiefs.

Experience shows that almost all training provides a possibility for moral, political and psychological tempering of students. Commanders, political workers and the instructor staff try to make the fullest use of such possibilities, which helps to significantly improve preparation of our graduates for successful action in modern combat.

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CSO: 1801/79

## HIGH PRECISION ANTITANK WEAPONS AND COMBINED-ARMS COMBAT

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 81-83

[Article by Col Yu. Molostov, candidate of military sciences: "High Precision Antitank Weapons and Combined-Arms Combat"]

[Text] In addition to developing and introducing new nuclear first-strike weapons into the troops (MX and Midgetman intercontinental ballistic missiles, Trident-2 ballistic submarine-launched missiles, Pershing-2 ballistic rockets, B-1B strategic bombers), in recent years the armies of capitalist countries have been devoting significant attention to creating qualitatively new conventional weapons--high precision antitank weapons in particular. Foreign military specialists explain this by the fact that the combined-arms formations of all armies are constantly receiving more tanks and other armored fighting vehicles, and their destruction continues to be an important problem.

To fight them, the U.S. Army is introducing the Assault Breaker antitank system into the operational-tactical level. This is a reconnaissance and strike complex with a range of up to 200 km. It is based on the use of homing projectiles and rockets, and it includes Lance-2 guided missiles, ground-based cruise missiles, tactical aircraft, multiple rocket launchers, Patriot antiaircraft missile systems and specially developed T-22 and T-16 rockets that operate in homing mode in the final leg of their trajectory.

The tactical level of the U.S. Army is armed with a battalion reconnaissance and fire complex. It includes 155-mm and 203.2-mm self-propelled howitzer systems, for which special Copperhead and Sadarm [transliteration] shells have been developed, and the following reconnaissance systems: Sotas [transliteration] (helicopter, radiological reconnaissance and target indication), Farfinder (instrumental artillery reconnaissance) and Rembas [transliteration] (remote control by reconnaissance and signaling instruments). There are plans for increasing the range of shells fired by the reconnaissance and fire complex from 20 to 70 km (they will be fire rocket-assisted projectiles).

The subunits of NATO country armies are currently being saturated with antitank guided rockets. Thus the quantity of antitank guided rocket launchers in their formations has quadrupled in a few years. They are being supplied to tanks, infantry fighting vehicles, armored personnel carriers and

helicopters. In addition improvements are being made on antitank artillery by increasing the range of direct fire, by creating projectiles of greater power and by raising fire accuracy. Improvements are also being made in antitank resources for close combat--grenade throwers and grenade launchers that can be attached to individual infantry weapons.

High precision weapons are effective because of the use of automated control systems and technical reconnaissance systems, which make it possible to detect and identify targets, determine their exact coordinates and transmit data to information processing points (centers) that use computers to control fire weapons in real time.

The troops now have the possibility for successfully implementing the principle "Fast detection, fast and dependable destruction." It has been noted that a T-16 rocket can knock out up to a tank company at ranges from 30 to 200 km, one aircraft-mounted container of Wasp rockets can destroy up to 12 tanks at ranges up to 300 km and more, one Sadarm artillery projectile can destroy up to three tanks, and a single Copperhead can destroy one tank at 20-70 km.

Tactical aviation possesses powerful armament. Thus the A-10A ground-attack aircraft, which uses six Maverick guided missiles and a cannon, can annihilate up to seven tanks, one armed with four Wasp rocket containers can destroy up to four tank companies, and an AH-64A Apache helicopter armed with Hellfire antitank guided rockets can destroy up to six tanks at ranges of 6-8 km. Let us recall data published in the foreign press for comparison: It would take around 10 tons of artillery ammunition to annihilate half of a subunit consisting of 10 tanks dispersed over an area of 0.2 km<sup>2</sup>.

It is believed that all of the conditions exist for effective and sudden long-range destruction of the enemy by fire with lower outlays of men and equipment. Moreover there is no longer a need to mass artillery within a confined area, and it takes a shorter time to knock out a large quantity of tanks, APCs, antiaircraft resources, control posts and communication centers located both on the battlefield and toward the rear. By concentrating fire, such systems can create zones of continuous destruction of enemy manpower and combat equipment, and create breaches in a troop combat formation similar to those that could be achieved with tactical nuclear weapons.

These changes are affecting some indicators of modern combat such as: depth of destruction--back-up echelons (reserves) can be cut off while simultaneously annihilating forward echelons; time--strikes against back-up echelons (reserves) can be planned, and men and equipment at the disposal of a senior chief may be allocated for their destruction ahead of time; means of destruction--not only the resources of the senior commander but also those at the disposal of lower commanders will be utilized in accordance with a single plan to isolate the region of combat activities from any influx of fresh enemy forces, which will motivate the sides to anticipate each other in opening fire, to gain a time advantage and to seize and firmly hold the fire initiative.

Evidence of this can be found in particular in the experience of World War II, during which defensive and offensive troops sometimes attempted actions against back-up echelons (reserves). This tendency is growing in modern conditions. Presence of the weapon systems described above makes it possible to continuously subject all elements of the combat formation of enemy units and formations to massed fire, to decisively restrict their maneuver and to disorganize the troop and weapon control system and the work of the rear services. In other words the tactical level is becoming a direct participant of not only long-range destruction by fire but also of the combined air-ground operation, which foresees extensive maneuver of the troops, and especially envelopment of the enemy from the air.

It is the viewpoint of the NATO command that combat involving high-precision antitank weapons could be made successful by clearly defining regions of responsibility, by planning to forestall the enemy in combat activities and by increasing pressure on him in the zone of a potential threat through the use of the senior chief's forces and resources. Overlapping the zones of responsibility of lower command levels by higher command levels is recommended. This would make it possible for commanders at all levels to make maximum use of men and equipment to destroy advancing back-up echelons (reserves), to obtain information on their losses, to predict the probability of subsequent actions and to gain time necessary to defeat the forward echelon. As a rule the duration of this period will be determined by the losses inflicted upon the back-up echelons (reserves) and by the time the enemy would need to restore the fighting efficiency of the forward echelon.

Foreign specialists recommend the following means of destroying the enemy to ensure successful combat: destruction and detainment of back-up echelons (reserves) by corps weapons (tactical aircraft, reconnaissance and strike complexes) and division weapons (tactical aircraft, tactical rockets, field artillery and army helicopters), conduct of raids against ground troop units and subunits by special forces and army aviation, and implementation of measures to mislead the enemy relative to the actual structure of the defenses, the fire plan and obstacles.

This was accomplished in annual Autumn Forge exercises by creating original dispositions of brigade and formation combat formations, by creating systems of false strongpoints and positions, by using local and continuous smoke screens, and by complying strictly with camouflage discipline.

As the enemy approached within the zones of combat activity of the divisions in these exercises, reconnaissance activities aimed at obtaining data and transmitting them in real time were intensified, and the intensity of fire and of electronic countermeasures was increased sharply. The forward echelons of the enemy grouping were destroyed within the zones of combat activities of brigades and battalions. Combat within them was characterized by tight coordination of the firepower and striking power of the subunits and units, by extensive maneuver of men and equipment, and by strikes by fire support helicopters, tactical aviation and artillery, though with a lesser quantity of men and equipment than before.

Foreign military specialists point out that use of high precision ammunition changes the traditional method of battalion fire. Provision of high precision ammunition to artillery will make transition to more effective fulfillment of missions not only by batteries and platoons but also by individual guns possible.

The fight for fire superiority will lead to duels between different weapon systems, and often at maximum range. He who has the best-organized reconnaissance, who performs his strikes and maneuvers faster and more artfully and who is able to annihilate targets with the first shots will win. Thus the Assault Breaker reconnaissance and strike complex being created in the USA can reconnoiter and hit 15-20 group targets (each equivalent to a tank company) in 60 minutes.

Tank units and formations will make wider use of rough terrain as a response to the use of high precision weapons. This is indicated in particular in the field manual FM 100-5 (1982). However, the tanks will have to be reinforced with infantry. It is believed that this may result in the creation of mixed units and subunits capable of independent combat activities. On open terrain it would be suitable to use tactical groups consisting predominantly of tank subunits.

Balanced tactical groups (having an equal quantity of tank and motorized infantry subunits) are believed to be the most flexible. Their use on terrain offering a diversity of conditions and when little intelligence is available on the enemy is recommended.

Foreign authors point out that determining the structure of the forward and back-up echelons at the tactical level, determining their disposition and movement in preparation for and conduct of combat activities, maintaining the integrity of the combat formation as a whole and raising its viability are becoming important needs. The role of the forward echelon rises with the use of high precision antitank weapons. Its composition in offense and in defense must be such that if the enemy achieves his goal of cutting off the back-up echelon (reserve), it would be capable of fulfilling its mission independently.

In the opinion of foreign specialists the purpose of the strike troop grouping in the offensive would be such that it would consist of two echelons--ground and air. The mission of the former is to penetrate enemy defenses and exploit the breakthrough, while that of the latter would be to envelop the combat formations of the defending troops in the air and strike the rear. In defense, an echelon to repel enemy strikes will be created together with a rear echelon to fight penetrating groupings, airborne forces and aeromobile units.



The changes described above will raise the significance of protecting the troops against high precision antitank weapons. This is one of the most important tasks of commanders in modern combat.

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CSO: 1801/79

## THE U.S. ARMY'S 'DIVISION-86'

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 84-87

[Article by Lt Col Yu. Kuropatov, Capt G. Fedulov: "The U.S. Army's 'Division-86'"]

[Text] Striving to achieve military supremacy over the Soviet Union and the Warsaw Pact countries, the military-political leadership of NATO has raised the arms race to an unprecedented level. It is now in a qualitatively new, even more dangerous stage.

The USA is playing the main role in this adventuristic policy. Concurrently with development of strategic offensive forces, the combat capabilities of the ground troops--the largest arm of the U.S. Armed Forces--are increasing at a rapid rate.

Thus mechanized and armored divisions of new organizational structure are being created under the general code name "Division-86" in accordance with the "Army-90" program.

In the opinion of American military specialists these divisions will be significantly superior to those presently in existence in terms of their combat indicators, and especially their fire and striking power, their maneuverability, and the possibilities of combat and rear support units and subunits.

It is noted in the foreign press that the "Mechanized Division-86" includes a headquarters and headquarters company, three brigade headquarters with a headquarters company in each, five motorized infantry and five tank battalions, an artillery battalion, an army air brigade, an antiaircraft battalion, communications, reconnaissance and electronic warfare and engineer battalions, a separate military police company, a separate company for protection against mass destruction weapons, and a rear command.

The mechanized division has a total of around 20,000 men, 290 tanks, 150 field artillery guns and mortars (84 of them can fire nuclear ammunition), 9 antiaircraft rocket launchers, over 340 Tow and Dragon antitank guided rocket launchers, around 400 Bradley infantry fighting vehicles and combat reconnaissance vehicles, over 460 APCs, and 146 helicopters, including 50 equipped with Hellfire antitank guided rockets.

The new armored division differs from the mechanized division only in the ratio of combat battalions. It contains six tank and four motorized infantry battalions. The quantity and composition of the rest of the units and subunits are the same.

The new division has more personnel than existing divisions (around 2,000 more), and it possesses larger numbers of motorized infantry and tank companies, fire weapons (guns using nuclear ammunition--22 units more; antitank resources--over 500 units more in the "Mechanized Division-86" and 400 units more in the "Armored Division-86") and other forms of armament and combat equipment. In addition the new divisions are equipped with Bradley M2 infantry fighting vehicles and M3 combat reconnaissance vehicles.

The headquarters is the division commander's main control organ in combat. It plans combat activities, assigns missions to subordinated units and subunits and monitors their fulfillment.

"Division-86" brigades do not have a constant composition in peacetime, except for headquarters companies. From three to five battalions (including one to three tank battalions), a 155-mm self-propelled howitzer battalion and reinforcements provided from combat and rear support units may be included in these brigades for exercises and combat operations depending on the mission.

Motorized infantry and tank battalions are the main tactical subunits. There are many things in common in their structure.

The motorized infantry battalion (896 men) consists of a headquarters, a headquarters company, four motorized infantry companies and an antitank company (see Diagram 1).

A tank battalion contains a headquarters and five companies (a headquarters company and four tank companies). As in a motorized infantry battalion, the headquarters contains four sections--reconnaissance, operations, personnel and logistics. It has a staff of 22 men, and it possesses two M-1 Abrams tanks (there are two M-2 Bradley IFVs in a motorized infantry battalion), three M577A1 command-and-staff vehicles, and 11 radio stations.

The company headquarters consists of an administration and six platoons (reconnaissance, mortar, signal, repair, supply and medical). A company has 257 men, six M-3 Bradley combat reconnaissance vehicles, six 106.7-mm self-propelled mortars, 11 M113A1 APCs, five 577A1 command-and-staff vehicles and 96 radio stations.



## Key:

- |   |  |
|---|--|
| 1. Motorized infantry battalion commander | 10. Signal                                 |
| 2. Staff                                  | 11. Reconnaissance                         |
| 3. Companies                              | 12. Mortar                                 |
| 4. Antitank                               | 13. Supply                                 |
| 5. Administration                         | 14. Medical                                |
| 6. Motorized infantry                     | 15. Repair                                 |
| 7. Headquarters                           | 16. Administration section                 |
| 8. Administration                         | 17. Detachment                             |
| 9. Platoons                               | 18. Sections                               |
|   | 19. Two Tow antitank rocket launchers each |

(1) Наименование	(2) Штаб МПВ	(3) Штабная рота							(13) МПР, четыре в каждой			(17) ПТР			(21) Всего в МПВ	
		(4) Управ- ные роты	(5) Взволы						(12) Всего в роте	(14) Управление роты	(15) Три МПВ. в каждом	(16) Всего в МПР ПТР	(18) Управление роты	(19) Три ПТВ. в каждом		(20) Всего в ПТР
			(6) связи	(7) развед.	(8) минометн.	(9) обеспеч.	(10) медиц.	(11) ремонт.								
Личный состав, чел. (22)	22	6	13	30	36	125	49	86	345	11	35	116	5	20	65	896
ПТРК (23)	—	—	—	—	—	—	—	—	—	—	—	—	—	4	12	12
М109 «Тор»	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
ПУ ПТРК «Дракон» (24)	—	—	—	—	—	—	—	—	—	—	3	9	—	—	—	36
106.7 самох. мином. (25)	—	—	—	—	6	—	—	—	6	—	—	—	—	—	—	6
БМП М-2 «Бредли» (26)	2	—	—	—	—	—	—	—	—	1	4	13	—	—	—	54
БРМ М-3 «Бредли» (27)	—	—	—	6	—	—	—	—	6	—	—	—	—	—	—	6
БТР (28) М113А1	—	—	2	—	—	—	8	5	15	1	—	1	1	1	4	23
КШМ (29) М577А1	3	2	—	—	2	1	—	—	5	—	—	—	—	—	—	8
7.62-мм (30) пул. М80	—	2	2	6	4	4	—	4	22	—	3	9	—	4	12	70
5.56-мм (31) ручн. пул.	—	—	—	—	—	—	—	—	—	—	6	18	—	—	—	72
Радио- (32) станции	10	6	10	12	18	18	14	26	104	4	8	28	3	6	21	247
Автомобили (33)	—	1	8	—	—	58	15	32	114	—	—	—	—	—	—	114
Рем.-эваку. маш. М88 (34)	—	—	—	—	—	—	—	7	7	—	—	—	—	—	—	7

## Key:

- |  |  |
|--|--|
| 1. Item                                      | 20. Total in antitank company              |
| 2. Motorized infantry battalion headquarters | 21. Total in motorized rifle battalion     |
| 3. Headquarters company                      | 22. Personnel                              |
| 4. Company administration                    | 23. M109 Tow antitank rocket complexes     |
| 5. Platoons                                  | 24. Dragon antitank rocket launchers       |
| 6. Signal                                    | 25. 106.7-mm self-propelled mortars        |
| 7. Reconnaissance                            | 26. Bradley M-2 infantry fighting vehicles |
| 8. Mortar                                    |  |
| 9. Supply                                    |  |
| 10. Medical                                  |  |

- |  |  |
|--|--|
| 11. Repair                                     | 27. Bradley M-3 combat reconnaissance vehicles |
| 12. Total in the company                       | 28. M113A1 armored personnel carriers          |
| 13. Motorized infantry company, four in each   | 29. M577A1 command-and-staff vehicles          |
| 14. Company administration                     | 30. 7.62-mm M-60 machineguns                   |
| 15. Three motorized infantry platoons, in each | 31. 5.56-mm light machineguns                  |
| 16. Total in motorized infantry company        | 32. Radio stations                             |
| 17. Antitank company                           | 33. Motor vehicles                             |
| 18. Company administration                     | 34. M-88 repair and evacuation vehicles        |
| 19. Three antitank platoons, in each           |  |

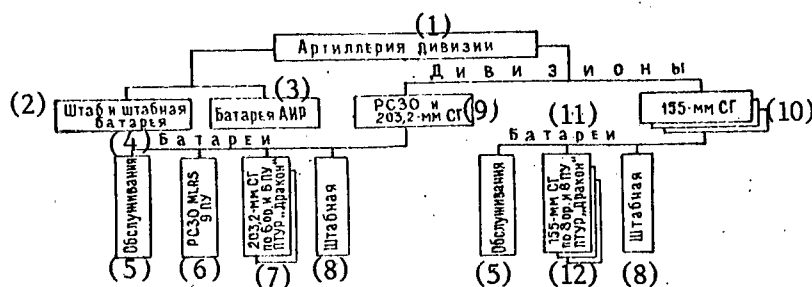
brigade contains a total of over 2,000 personnel and 146 helicopters of various kinds, including 50 AH-64A Apache antitank helicopters equipped with 16 Hellfire antitank guided rockets each.

The antiaircraft battalion is intended to provide air defense to the division at low altitudes, and to annihilate light armored vehicles and enemy manpower. It consists of a headquarters and six batteries: headquarters, improved Chaparral surface-to-air missile battery, Stinger surface-to-air missile battery, and a battery equipped with Vulcan self-propelled artillery aircraft and Stinger surface-to-air missiles (three). A battalion contains a total of around 860 men (including 46 officers), 18 improved Chaparral surface-to-air missiles, 36 Vulcan self-propelled antiaircraft artillery mounts, 75 Stinger surface-to-air missile launchers (gun crews), two M577A1 command-and-staff vehicles, 21 M113A1 armored personnel carriers, more than 230 trucks and eight FAAR low-flying target detection radar stations.

It is noted in the foreign military press that the battalion occupies fire positions as individual batteries to cover the division's units and subunits against the airborne enemy. In this case batteries equipped with Vulcan antiaircraft artillery and Stinger surface-to-air missile launchers cover brigades of the forward echelon, improved Chaparral batteries cover the division's back-up echelon, and Stinger crews cover field artillery battalions.

Diagram 2. Organization and Armament of the U.S. Artillery Division

Схема 2. ОРГАНИЗАЦИЯ И ВООРУЖЕНИЕ АРТИЛЛЕРИИ ДИВИЗИИ США



Key:

- |   |  |
|---|--|
| 1. Artillery division   | 8. Headquarters  |
| 2. Headquarters and headquarters battery  | 9. Multiple rocket launcher systems and 203.2-mm self-propelled howitzers                  |
| 3. Artillery instrument reconnaissance battery  | 10. 155-mm self-propelled howitzers  |
| 4. Batteries  | 11. Batteries  |
| 5. Maintenance  | 12. 155-mm self-propelled howitzers, 8 guns, and 8 Dragon antitank guided rocket launchers |
| 6. MLRS multiple rocket launcher systems, 9 launchers                                       |  |
| 7. 203.2-mm self-propelled howitzers (6 each) and 8 Dragon antitank guided rocket launchers |  |

(1) Наименование	(2) Штаб и штабная батарея	(3) Батарея АИРС	(4) Дивизион РСЗО и 203.2-мм СГ	(5) Три дивизиона 155-мм СГ в каждом	(6) Итого в артиллерийском дивизионе
Личный состав, чел. (7)	194	166	578	774*	3260*
203.2-мм СГ (8)	—	—	12	—	12
155-мм СГ (9)	—	—	—	24	72
РСЗО MLRS (10)	—	—	9	—	9
ПУ ПТУР «Дракон» (11)	—	—	12	24	84
КШМ М577А1 (12)	1	—	11	13	51
БТР М113А1 (13)	—	—	—	15	45
Автомобили (14)	14	70	184	177	799
Радиостанции (15)	21	53	159	240	953

\*There are 750 men in a Division-86 155-mm self-propelled howitzer battalion, and there are a total of 3,188 men in an artillery division.

Key:

- |  |   |
|--|---|
| 1. Item  | 9. 155-mm self-propelled howitzers          |
| 2. Headquarters and headquarters battery                                   | 10. MLRS rocket launchers                   |
| 3. Artillery instrument reconnaissance battery                             | 11. Dragon antitank guided rocket launchers |
| 4. Multiple rocket launcher and 203.2-mm self-propelled howitzer battalion | 12. M577A1 command-and-staff vehicles       |
| 5. Three 155-mm self-propelled howitzer battalions, in each                | 13. M113A1 armored personnel carriers       |
| 6. Total in an artillery division  | 14. Trucks                                  |
| 7. Personnel   | 15. Radio stations                          |
| 8. 203.2-mm self-propelled howitzers                                       |   |

Increasing the potentials of reconnaissance is getting considerable attention in the new organization. Considering its significance to combat, the U.S. command decided that in addition to the reconnaissance battalion that is within the composition of the helicopter brigade, it would additionally raise the possibilities of the separate reconnaissance battalion and electronic warfare battalion. Military specialists of the U.S. Army feel that presence of radar stations and other reconnaissance apparatus in the battalion would allow it to determine the location and nature of actions of the enemy at great depth, and to carry out missions in behalf of the commanders of units and subunits operating in direct contact with the enemy.

The requirements of modern combat were accounted for by the American military leadership when creating rear services units and subunits. In particular they were equipped with armored transport vehicles. A transport, a repair and a medical battalion, three battalions providing rear services to the brigades, a logistical support center and headquarters and administrative companies are included in the composition of the division's rear services command.

In the opinion of American military specialists the new type of division will be used chiefly against tank and mechanized groupings of the probable enemy in the European theater of military operations.

The American military leadership is presently developing the most optimum means of combat activities of ground troop formations with regard for the growing combat potentials of "Division-86." The foreign press notes that a massive influx of new armored, artillery, antitank and other forms of armament into the troops that are significantly superior to previous generations in range, power and precision is creating the basis for increasing the depth of a division's missions and its rate of advance, and a general decrease in the time it takes to attain the goals of combat.

Thus American military specialists feel that "Division-86," which will be equipped with nuclear and high precision weapons as well as other modern models of armament and combat equipment, will possess high fire and striking power and mobility, and will be capable of executing missions in complex combat situations.

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11004

CSO: 1801/79



## TRAINING IN U.S. ARMY SUBUNITS AND UNITS

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 87-89

[Article by Col Yu. Groshev, candidate of military sciences: "Training in U.S. Army Subunits and Units"]

[Text] The command of the U.S. Army attaches enormous significance to troop combat training as the basic component of victory in a future war. In particular it believes that an enemy's advantageous numerical superiority may be compensated by competent leadership of the troops and a high level of personnel training.

Personnel are trained in ground troop training centers or in basic training courses conducted in division brigades, as well as in the subunits and units of permanent divisions. But training centers do most of the training. It is divided into two stages (courses)--basic or initial consisting of three periods, and advanced individual training. The first lasts 8 weeks, it is mandatory for all recruits irrespective of the nature of their subsequent service, and it is conducted in accordance with a general training program. Its main objective is to make the soldier physically strong, to provide him with the necessary knowledge and habits of acting in the basic forms of combat as an infantryman, and to nurture his faith in himself, in his weapons, and in his fellow servicemen and chiefs.

In the first period recruits are acquainted with the principles of military law and military discipline, they undergo drill and physical training, they study mass destruction weapons and defense against them, they learn the rules of wearing the uniform, and they undergo adaptation to the army environment. In the second period attention is focused on fire training. The recruits study weapons and infantry theory, and the personnel acquire the habits of handling weapons. At the conclusion of the period the personnel participate in two classification firing exercises using M16A1 rifles (day and night). In the third period the soldiers practice the use of weapons in combat. Then they participate in practical field exercises with live ammunition.

The main subjects in this stage are tactical, fire and physical training. Moreover the soldiers study regulations, reconnaissance, engineering, defense against mass destruction weapons, military topography, disease prevention and first aid. The soldiers undergo intensive ideological processing. After

completing their training at training centers they take tests in combat skills and physical training. Additional training and retesting are organized for servicemen who fail these tests. Those who are still unable to qualify must go through the entire program again. Those who pass the tests are sent either to training centers for advanced individual training or to the division where they continue their training and service.

The advanced individual training stage (course) is conducted with the purpose of preparing servicemen specifically for their selected specialties and for actions as members of a detachment and a crew, and it lasts 6 to 8 weeks and more. Thus infantrymen and tankmen devote their main attention to tactical, fire and technical training and to driving combat vehicles. In the last 7 days they undergo field training as members of a detachment (a crew) in conditions as close to those of real combat as possible. This training ends with a one-day tactical field firing exercise. After completing the course the servicemen are sent to a permanent division for another year of training. Two hundred forty training days are planned in this period, broken down into quarters. Twenty training days are devoted to combat training each month, there are 5 days in every training week, 8 hours in a day and 50 minutes in an hour. The total training time budget is 1,920 hours.

Collective and individual training is employed in this period. In the former, which is the dominant kind of training, the subunits and units undergo a process of coordination. One hundred forty-four days--3 a week--are devoted to such training each year. These training days take precedence above all other functions.

The purpose of individual training is to deepen knowledge, to maintain the knowledge and habits servicemen obtained at training centers, and to improve this knowledge. Seventy-two days--one and a half days a week--are devoted to such training per year. Half of a day a week is devoted to maintenance and repair of equipment and armament, periodic technical servicing, competitions, medical services, financial support and other measures.

Tactical, aeromobile, antitank, fire and physical training are believed to be the principal subjects in permanent divisions.

Individual training tasks are created for each serviceman in the American army depending on his time of service, training level, physical and intellectual development, interests, capabilities and possibilities, as well as the specific combat training missions of the subunit. Each of these training tasks includes problems and standards that must be fulfilled by the serviceman in order to prepare for qualifying tests for the next highest rating.

The content of collective training is determined by collective training tasks, which are divided into four categories of difficulty. They are drawn up for each detachment (crew), platoon, company, battalion and brigade depending on their training level, their coordination in particular forms of combat and

their purpose in combat. Moreover the content of the tasks for detachments, platoons and companies is based on the tasks of the battalions, while the latter are based on the tasks of the brigades. Completion of these training tasks signifies a certain degree of combat readiness of the subunits and units.

Following this training sequence, the American command tries to subordinate all subjects to tactics. It feels that training in individual disciplines divorced from tactics may even have an unfavorable effect on combat training quality, and reduce the intensity of the training process.

American military specialists believe that the rhythmicity and effectiveness of training depends in many ways on the quality of planning. The secretary of the army's order for combat training for the training year is the basis of such planning. This document defines the general directions of troop training, the deadlines for mandatory measures (exercises, maneuvers, training on ranges belonging to other countries and so on) in compliance with the plans of the NATO command and ground troops for the continental part of the country, and the training time to be allocated in the given period.

Memoranda, training plans, permanent instructions, methodological directives and other documents are drawn up by field army and army corps staffs for formation and unit commanders as a development of the order of the secretary of the army with the purpose of achieving uniformity in the organization of the training process and economizing on planning time.

An organizational order, a combat training order and general combat training plans are published in the divisions and separate brigades. Combat training plans are drawn up for the training year. A schedule and a written list of principal measures are attached to the combat training order.

Battalion (separate company) combat training programs and plans are drawn up for 6 months, while in the companies and separate platoons, combat training plans, minimum basic requirements and qualification testing requirements are drawn up quarterly on the basis of the battalion commander's instructions. Detailed two-week schedules are also drawn up at this level. They are brought to the awareness of the personnel a month before the training begins, and they are changed only as an exception. A five-day week training schedule is also drawn up.

The main directions of organizing combat training in the platoons and detachments are presented and the content of collective training tasks is determined in the minimum basic requirements for companies. Detailed weekly plans are also drawn up in these subunits.

The so-called principle of decentralization lies at the basis of the organization of combat training in American ground troop divisions. According to this principle, battalion and company commanders are allowed to independently organize the training of units and subunits subordinated to them. They are entitled to determine the content of the combat training and the sequence and deadlines of completing training tasks, and to select the forms and methods of the training.

At the same time, the training process is organized in a strict sequence. First the tasks of each subunit of a battalion and of the battalion as a whole are determined. The results that the training should achieve are specified. Then the tasks and the possibilities the personnel have for completing them are analyzed. The conditions of the tasks, the standards and the indicators to be used for grading purposes are specified. Ways to close the gap between the existing and necessary training level of the servicemen are determined.

The American command attaches great significance to control, of which inspection is the main form, and it views it as the most important element of the training process. Inspections are conducted with high intensity. Fourteen percent of the training time is devoted to them. Depending on the composition of personnel to be inspected they are divided into collective and individual inspections; they are divided in relation to method and time into current inspections (unofficial) and practice and operational readiness inspections (official).

Individual inspections are carried out with the purpose of determining the individual training level of servicemen, as revealed in their performance of functional responsibilities in a combat situation, of revealing poorly trained individuals and of determining the potentials of the soldiers for improving their occupational proficiency. Current inspections are conducted selectively in the course of training by battalion, company and sometimes platoon commanders, not less than once a week. Grades are given mandatorily. If a soldier's actions fail to satisfy the requirements established for the given stage, he is appointed a coach (usually a detachment commander), and then he takes a retest a week later. If he still is unable to produce positive results, he is sent to a "Soldier's School" battalion for a special intensive training course.

Practice inspections of individual performance of soldiers are conducted by battalion administrative officers together with observers from brigade headquarters, once a quarter as a rule. In addition individual preparedness is also inspected in the course of qualification tests conducted once every half year.

Collective inspections are organized to determine the training level and coordination of subunits and units. Current inspections are conducted during the time of collective training, usually by commanders in charge of the training and by representatives from higher headquarters. Detachments (crews), platoons, companies and battalions are subjected to practice inspections at the end of every training quarter with the purpose of determining their level of combat readiness.

In these inspections the subunits and units carry out a number of specific tactical missions in combination with other training subjects. In addition they participate in qualification firing exercises and driving exercises in interaction with reinforcements. If there is even one unsatisfactory score, the inspection is postponed, and time is provided for training having the purpose of correcting the revealed shortcomings. This inspection is repeated at least 6 weeks after the first.

Operational readiness inspections are planned by higher levels with the purpose of comprehensive study and assessment of the activities of the personnel, subunits and units, and of combat training results.

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## COLLECTING FOR INJURIES TO THE STATE

MOSCOW VOYENNNYY VESTNIK in Russian No 10, Oct 86 pp 90-92

[Article by Lt Col (Justice) B. Kuznetsov: "Collecting for Injuries to the State"]

[Text] Dear editor!

The overwhelming majority of Soviet people maintain a concerned and thrifty attitude toward public wealth. But there still are some who abuse socialist property. And one can imagine how much the national economy suffers from extravagance, slipshodness, negligence, waste, absenteeism and falsification of records.

In my opinion one of the causes of carelessness is shortcomings in the procedures for collecting material compensation from those responsible. I would like to know the opinion of military lawyers.

Lieutenant V. Novikov,  
Far East Military District

Lieutenant V. Novikov validly noted in his letter that the overwhelming majority of Soviet people, including soldiers, correctly understand their civic duty in relation to socialist property, in relation to the public wealth. Thrift, sensible use of all resources, strict economy and carefulness are the most important prerequisites of further development of the national economy and reinforcement of our country's defensive might.

The USSR is doing everything it can to eliminate the threat of nuclear war and subdue the arms race in the present tense international situation. However, the ruling circles of the USA continue to increase nuclear and cosmic arms at an unprecedented scale. The Soviet Union has no choice but to retaliate. The Soviet Union allocates sizable material and financial resources to the armed

forces. Careful use of these resources has special significance: Soldiers are required by the nature of their duty to not only protect their socialist fatherland with arms, but also to untiringly preserve public wealth. They are obligated to do so by their civic duty, by the military oath and by military regulations.

Quite unfortunately, however, cases have occurred where unconscientious servicemen have treated material valuables carelessly, and failed to protect them adequately. Some display carelessness not only in relation to personal gear, furniture and dishware, but even in relation to weapons and combat equipment.

In order to activate the struggle against such persons and to strengthen the sanctions imposed for mistreatment of socialist property, mismanagement, negligence and other violations of economic law, on 13 January 1984 the Presidium of the USSR Supreme Soviet approved the new "Statute on Material Liability of Servicemen for Harm Inflicted upon the State," which went into effect on 1 March 1984.

According to this statute all servicemen and reservists called up for training who are guilty of causing injury to the state in the performance of their official duties are held materially liable.

The statute also applies to students in military schools.

Servicemen who cause injury not during the performance of official duties bear material liability under civil law.

The statute foresees that servicemen and reservists participating in training must compensate for any losses irrespective of whether or not they are subjected to disciplinary or criminal proceedings for any action or inaction that caused injury to the state. In this case the loss may be compensated voluntarily by those responsible, either completely or partially.

It must be kept in mind that according to the new statute servicemen and reservists called up for training become materially liable only when the following four conditions are satisfied:

existence of real direct injury;

unlawful behavior of the serviceman causing the injury, expressed as careless execution of his official duties, of specific requirements of the laws, military regulations, manuals, instructions, orders and directives governing the procedures for storing, using and expending material valuables and money;

a specific individual is guilty of causing the injury;

there is a causal relationship between the person responsible, his action and the resulting injury.

In order to encourage first-term servicemen and reservists called up for training to display a more careful attitude toward military property and other

material resources, the statute introduces material liability for injury caused by their careless execution of official duties foreseen by military regulations, orders and other documents. This liability is set equal to the amount of the injury but not more than 100 rubles for enlisted men, NCOs and students and 150 rubles for reservists called up for training.

Officers, warrant officers and extended-service servicemen play an important role in organizing the efforts to make economical and purposeful use of materials, money, equipment, armament, ammunition and other property; the condition of public wealth depends to a significant degree on their conscientious performance of official duties.

Considering this circumstance, the new statute increased the material liability borne by this category of servicemen in comparison with previous legislation. Thus it foresees the general norm that warrant officers, extended-service servicemen, officers and generals bear material liability equal to the injury but not more than a month's pay for injury caused due to careless execution of official duties. They also bear material liability of such dimensions for losses for which they are at fault resulting from idleness of rail cars, vessels and motor vehicles. The previous statute had not foreseen this.

It should be noted that women on active duty as soldiers and NCOs also bear material liability for injury to the state caused by negligent execution of official duties, amounting to a month's pay.

The statute does not define what the pay of servicemen is. This question is resolved by an order of the USSR minister of defense.

When servicemen receiving extra pay for service in remote locations of the USSR or in other cases foreseen by the law are subjected to material liability, this extra pay is taken into account.

Recovery for material loss from reservists called up for training is accomplished from pay allocated for the training period.

The statute widens the list of cases in which servicemen and reservists called up for training bear material liability in the total amount of the injury inflicted by them upon the state. They bear such liability not only if they inflict injury through an action (inaction) having the attributes of an act that is liable to criminal prosecution (Article 8), but also in the following cases:

deliberate destruction, damage, spoilage, pilferage and illegal expenditure of military property, or infliction of injury by other deliberate actions, irrespective of whether or not these actions have the attributes of acts liable to criminal prosecution;

misrepresentation of work actually done in job orders and other documents, distortion of reporting data and deception of the state in other forms;



a shortage, destruction or spoilage of military property entrusted to them on account for storage, shipment, issue, use or other purposes;

infliction of injury by a person in an intoxicated state.

Expenditure of military property, the definition of which also includes money, for purposes for which it had not been foreseen and had not been allocated--that is, for other than its directly intended purpose (for example to organize banquets, anniversaries, pleasure trips and so on)--is illegal.

The statute also intensifies the liability of commanders (chiefs) for injury inflicted upon the state by their subordinates (Article 12). They are subjected to material liability equal to the injury inflicted, but not more than a month's pay, when by their improper actions they violate the established procedures for accounting, storing, using, expending and transporting military property, and when they fail to take the necessary steps to prevent its pilferage, destruction, damage and spoilage, or to cause persons responsible to compensate for injury inflicted on the state.

It should be kept in mind that commanders and chiefs who fail to take steps to compensate for injury inflicted on the state may be subjected to material liability only in cases where it is impossible to do so at the expense of those directly at fault (for example if the person responsible dies, if the statute of limitations runs out and so on).

The safekeeping of special clothing, gear and other property has important significance. In this connection the statute foresees that servicemen and reservists called up for training bear material liability for losses inflicted by pilferage, embezzlement or loss of special clothing, gear, footwear, articles held on inventory and other certain forms of military property. The amount of this liability is equal to some multiple of the value of the property (Article 10).

The list of such property is approved correspondingly by the USSR minister of defense, and the value of this multiple is established by a procedure determined by the USSR Council of Ministers.

The statute foresees that servicemen and reservists called up for training who are guilty of misappropriating and losing excessive amounts of currency and of jewelry and other personal articles made from precious gems, and their breakage, bear material liability in accordance with existing law established for workers of state, cooperative and other public enterprises, institutions and organizations who commit such violations.

One important norm of Article 16 of the statute states that the dimension of the injury inflicted upon the state is determined in relation to actual losses on the basis of accounting data expressed in retail prices, and when the latter are unavailable, on the basis of prices determined by a procedure established by the USSR State Committee for Prices.

Special attention should be turned to the fact that a commander (chief) may reduce the total amount by which injury is compensated with the permission of

a higher commander (chief). This can also be done in the appropriate cases by a judge, depending on the circumstances under which the injury was inflicted, on the degree of blame carried by the person responsible and on his material status, except in cases where injury is inflicted as a result of crimes committed with mercenary motives. At the same time it should be kept in mind that when the amount subject to collection from the person responsible is reduced by a commander (chief), the total cannot be less than the amount foreseen by Article 7 of the statute--that is, a month's pay.

Questions concerned with subjecting servicemen to material liability must be resolved in strict compliance with socialist legality. Even the slightest violations of the rights and interests of both servicemen on one hand and military units, institutions, organizations and enterprises on the other are impermissible. In this connection the statute foresees specific binding rules of administrative investigation of cases involving injury, and the procedure for compensating for such injury, which must be followed without deviation.

When a commander (chief) of a military unit, institution, military school, enterprise and organization discovers an injury, he is obligated to immediately begin an administrative investigation in order to reveal the causes of the injury, its magnitude and the individuals responsible. The investigation should be completed within a month; however, it may be extended when necessary by a higher commander (chief), but for not more than 1 month.

An administrative investigation need not be carried out if the causes, the dimensions of the injury and the persons responsible are established by an audit, an inspection, an inquest or a trial. An order of the commander announcing collection of the appropriate sum from the person responsible must be published within a month after completion of the administrative investigation or after materials are received from court investigatory organs or from inspection and auditing organs. In a case where several persons are responsible for injury, the commander's order indicates the exact amount to be collected from each responsible person separately depending on the injury he inflicted, the concrete circumstances and the degree of blame.

The collection order is served to the person responsible under his signature, and it may be appealed in the order established by the USSR Armed Forces Disciplinary Regulations. Collection is not postponed while an appeal is in progress. But if a commander's order subjecting a person responsible to material liability is protested by a military procurator, collection is postponed until its examination. When an order is repealed, collected sums are returned.

The statute limits the size of monthly collections from the pay of servicemen so that they would have enough money for normal fulfillment of their official duties and for satisfaction of material and spiritual needs. This amount cannot exceed 20 percent of monthly pay, or 50 percent when collecting for injury inflicted by misappropriation and embezzlement of military property. If other collections foreseen by law are being made from the pay of a serviceman, the total amount of all collections cannot exceed 50 percent of the monthly pay. The procedure and priority of collection are determined in this case by civil procedural law.

A procedure is also foreseen for compensation of injury by servicemen, including first-term servicemen as well as reservists called up for training, who have not made full compensation by the day of their transfer to the reserves or retirement, or completion of training.

In accordance with the statute (Article 22) this debt is collected by a bailiff at the individual's place of residence without the right of appeal on the basis of an order signed by a notary organ. An order to collect the remaining debt is obtained by submitting, to a notary organ, a certificate from the military unit, institution, military school, enterprise or organization indicating the amount of the debt the serviceman still owed on the day of his dismissal from military service.

Correct understanding and consistent implementation of the new statute on the material liability of servicemen has great significance in the struggle against transgressions upon socialist property, mismanagement, waste, false reporting and other violations of state discipline.

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## TOURIST ROUTES BECKON

Moscow VOYENNY VESTNIK in Russian No 10, Oct 86 pp 93-94

[Article by Col B. Abramov, Directorate for Tourism and Excursions, USSR Ministry of Defense: "Tourist Routes Beckon"]

[Text] Many servicemen about to go on ordinary leave start thinking about how to spend it so as to get a good rest and improve health.

Unfortunately some of us do not always do the best thing. Some invariably apply for a sanatorium pass (though they do not always have a need to do so) or a vacation home, while others, joining the millions of migrants to vacation spots, travel compulsively from one corner of the country to another.

It often happens that both the former and the latter return home dissatisfied: They are fatigued by unnecessary medical procedures, and by long lines.

But there is a fabulous way to rest--tourism. It is the most popular form of active rest for servicemen, and an important means of their communist indoctrination, physical conditioning, improvement of applied military skills, and improvement of health.

Tourism is commonly subdivided into planned and independent. Many are familiar with the former, and therefore I will only recall the basic principles. In planned tourism, servicemen and their families as well as white and blue collar workers of the Soviet Army and Navy vacation at tourist bases belonging to the Ministry of Defense on the basis of travel and accommodation warrants for the period of the leave or school break. New privileges were established for such individuals 2 years ago (servicemen pay 25 percent of the cost of the warrant while their families pay 50 percent; one family member is given round-trip military travel documents to the tourist base).

But the possibilities of planned tourism are limited. They are determined by the availability of bases and their capacity. Independent tourism, which has developed widely in the armed forces, should be discussed in greater detail in this connection. It consists basically of trips on days off, long journeys, rallies, relays, excursions and marches to points of interest in Lenin's history and to points of revolutionary, combat and labor glory of the Soviet

people and their armed forces, and familiarization with the accomplishments of communist construction and with historical monuments, cultural valuables and our motherland's remarkable nature.

Independent tourism provides for rest and physical improvement of servicemen and their families, for the training of ranked sportsmen in applied military forms of sports, of ranked sportsmen in tourism and of "USSR Tourist" badge holders, and for category I-V marches based on specially developed programs.

One of the main forms of independent tourism is annual all-army competitions for the best journey. In these competitions, new routes are created and assimilated, the strongest tourist collectives are revealed, and district (fleet) and armed forces champions of different forms of tourism are determined.

Independent tourism is managed by district departments of tourism and excursions, and by tourist clubs and sections created in units and military schools. Clubs are organized with not less than 75 active tourists, while sections are organized if less than this number desiring to participate in tourism are present in the military collective. The objective of the clubs and sections is to organize marches on days off and holidays, organize excursions, train "USSR Tourist" badge holders, ranked sportsmen and teams to participate in competitions in different forms of independent tourism, and to conduct tourist rallies and leisure evenings.

Individuals enrolling in a club or section participate in one group specializing in one of the forms of independent tourism--hiking, skiing, alpine, water, bicycle, motorcycle and car. Those who have fulfilled the standards for a "USSR Tourist" badge may participate in marches on classified routes if desired. These marches are performed in accordance with the rules of independent tourist marches and journeys on USSR territory, in compliance with safety measures. Sports ranks are awarded to those who fulfill the established standards.

Before participating in marches, club and section members improve their general physical, moral and volitional conditioning and their technical and tactical training, and they assimilate the technical procedures of surmounting obstacles encountered in the selected form of tourism. Training is carried out under the guidance of tourism instructors and specialists in physical training and sports, year-round in all weather.

Naturally the initial training goes on in favorable conditions, in gymnasiums and on training fields, and then on terrain and in water basins selected by route and qualification commissions. The situation is made gradually more difficult from one training session to the next. Critical situations are created--for example upsetting of a canoe, an accident on a slope, or a fall while crossing a river or a canyon. This permits development of the necessary technical skills, and it makes it possible for the individual to learn to act efficiently, boldly and resourcefully and to confidently surmount stressful states during marches, which in many ways helps to improve applied military skills.

A well organized process of training and indoctrination can be found in the tourist club in which Major S. Belugin is the council chairman (Moscow Air Defense District). The club has over 80 active members participating in hiking, skiing and bicycle tourism. The club council includes a Komsomol worker, the unit chief of physical training and sports, subunit tourism organizers, section leaders and members of the women's council.

Excursions and marches on days off in the Moscow suburbs, to points of interest in Lenin's history and to battlefields of the Great Patriotic War have become traditional in the club.

Thus a number of marches were carried out on the 40th anniversary of the victory along the Moscow Line of Glory (on a route through Dmitrov, Dobko, Zelenograd, Istra, Volokolamsk, Kubinka, Naro-Fominsk and Serpukhov). During the marches the servicemen and their families do maintenance on monuments and fraternal graves of Soviet soldiers: This is mandatorily included in the plan of each march.

The ski tourism section, which is led by Captain S. Gromov, organized a three-day march to points of interest in Lenin's history in honor of the 27th CPSU Congress. Its participants traveled over 60 km, visiting V. I. Lenin's home-museum in Podolsk, and the Lenin Hills. Captain K. Surzha headed a ski tour to places of battle with German invaders in the vicinities of Tuchkovo and Kubinka.

Many officers participated with their families in these and other marches. Among them were Lieutenant Colonel V. Klimenko, majors V. Redkin, S. Kukolov and I. Talalakin, captains V. Bagay, Yu. Danileychenko and A. Polivanov, and Senior Lieutenant A. Firsov.

The club conducts tourist evenings, to which it invites all desiring to acquaint themselves with "trophies" acquired during marches--photographs, slides, movies and tourist songs. Tourist relays and rallies are also organized.

The club is constantly growing. During the Fourth All-Army Rally a new section was organized in the club--water tourism. It was placed under the management of Senior Lieutenant V. Panyukhin. There are possibilities for conducting intense training and interesting marches on rivers in the Moscow vicinity--Moskva, Istra, Protva and Nara.

Effective assistance by the command is in many ways responsible for the club's successful activities. The command provides buses for excursions, and it accommodated the club in a spacious building.

I would like to emphasize in conclusion that the work being done by the club is having a beneficial effect on indoctrination of servicemen and their families, and on strengthening their health. It would be sufficient to point out that this year hardly any of them caught colds. That is an impressive indicator. Leaders of large military collectives should turn their attention to this, and most importantly, they need to implement effective measures to create such clubs and encourage their subordinates to join.

Independent tourism is accessible to every serviceman and his family. I would advise young officers and warrant officers to begin their tourist pursuits with independent tourism. After all, it is not always possible to obtain a travel and accommodation warrant for a tourist base by the time leave begins, while clubs operate year-round at the place of work. Join them, be active participants, and travel over your part of the country. You will experience the incomparable happiness of being at one with nature, you will gain strength, and you will condition your spirit and your body.

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